# Part II

# Section II

# Maternal and Children's Special Health Care Services

# Of the

# Indiana State Department of Health

# Five Year Needs Assessment

# Submitted

# July 15, 2005

# For

# FY 2006

## Table of Contents

## B. Five Year Needs Assessment

### 1. Process for conducting the Needs Assessment

The State of Indiana conducts a comprehensive needs assessment at five-year intervals to assess the overall needs for three specific populations: infants, children, and women. This needs assessment also measures the capacity for delivering needed services to these target populations. It is used to guide and develop programs to serve the target populations, to develop annual performance measures, to develop and modify health status and capacity indicators. The needs assessment allows for allocating resources according to identified priority needs in order to improve the health of all three target populations.

The methodology used in conducting the needs assessment is multi-faceted. Information to be used in determining both capacity and statistical information is gathered from various credible website sources (including Healthy people 2010) in-house epidemiology resources (mortality and morbidity rates, birth rates, risk factors, accessibility of health personnel), current funded programs, both external (Medicaid) and internal (various MCH/Children's Special Health Care program information). Community outreach in the form of focus groups, town meetings held at various locations throughout the state, and a web-based needs priority Q-sort were also a part of the information gathering. (A Q-sort is a statistical analysis tool used to determined an order of importance or significance assigned to each member of a group of different items. Often it is used when a large number of items have similar priorities and importance.)

The Health indicator data and health capacity data are used at both statewide level and county level. If possible these data is compared to national benchmarks like the most recent U.S data, and Healthy People 2010 goals to assist the Maternal and Children's Special Health Care Services in prioritizing and planning maternal and child health statewide programs.

A "Systems Discrepancy Model" is used to assess the county health needs. The model determines the Healthy People 2010 goals for the selected health indicators and measures the county level performance measures with these goals. Counties whose performance did not meet the Healthy People 2010 goals were assessed as being in need of improvement for that particular indicator.

Data analysis, including analyzing the statistical information and priority survey results, was performed by both MCH personnel and ISDH Epidemiologists. This, in turn, led to some modification or suggested replacement of current areas of emphasis, current performance indicators, health status indicators, or capacity indicators based on determined needs. Examples of this were the need to increase focus on reducing obesity in adults and children in Indiana, family violence, and continued emphasis on reducing disparities.

Simultaneously, the capacity of various state and local entities within Indiana to address the identified needs was determined. Data regarding hospital capacity, number of health care providers of various types statewide, and distribution throughout the state of those providers were considered within this analysis. For this needs assessment, ISDH developed an

Epidemiology Survey tool to help determine local capacity in disparate parts of the state. The ISDH Public Health Preparedness District Epidemiologists collaborated with MCSHC to gather data via those surveys. The survey data were analyzed by MCSHC staff. ISDH also developed a web-based prioritization survey tool, a Q-sort, which was made available to the general public and specifically brought to the attention of key local health care participants and parents of children with special health care needs.

A number of formal and informal partnerships and collaborations with both public sector and private sector entities have been used in this needs assessment. ISDH has succeeded in developing and implementing a Memorandum of Understanding with the office of Medicaid Policy and Planning (OMPP) to obtain needed Medicaid information. Also, the new Health Commissioner has also been appointed Medical Director for Medicaid which should improve collaboration. ISDH has also established information sharing process with the Indiana Department of Education, and the Family and Social Services Administration (FSSA). In addition, ISDH has established relationships with working groups, such as the Indiana Perinatal Network, Indiana Minority Health Coalition, Indiana March of Dimes, Indiana Health Professions Bureau, and other organizations. Indiana is continuing to use partnerships and collaborations, as in the past, for this needs assessment.

The quantitative methods of assessing the needs of the three MCH populations are numerous. To measure capacity, specific data related to number of services and health care professionals within the state in various regions of the state have been gathered. Epidemiologists at the ISDH used a wide variety of statistical analysis tools including standard statistical analysis packages (e.g., SAS, SUDAN) to assist in the analysis. Qualitative methods have also been used, including focus groups in Marion County (Indianapolis) and Lake County and town meetings in multiple counties around the state that had specific emphases such as children with chronic disease and special needs, child care and perinatal disparities. Both qualitative and quantitative analysis were used to ensure identification of the health needs and capacity needs both from a global statewide perspective and from a client population-based perspective.

The MCH pyramid of directed health care, enabling services, population-based services, and infrastructure building has always served as a good general guideline of distribution of ever more limited assets among ever increasing categories of need. MCH personnel sit on, and in some instances, chair, various committees dedicated to addressing specific needs in all of the pyramid categories. Examples include the State Systems Development Initiative Data Integration Steering Committee, which includes key personnel from every division within the ISDH, the Indiana Genetics Advisory Committee, and the Indiana Joint Asthma Coalition.

Sources used to comprehensively produce the best needs assessment possible include various committees, Indiana State Department of Health, OMPP, Department of Education (DOE), Indiana Family and Social Services Administration (FSSA), Centers for Disease Control (CDC), National Vital Statistics Reports (NVSS), National center for Health Statistics, Behavioral Risk Factor Surveillance System (BRFSS), Federal Resource Enabling Data (F-R-E-D), Indiana Youth Risk Behavior Survey (YRBS), Indiana Prevention Resource Center, Women Infants and Children (WIC), Pediatric Nutrition Surveillance System (PNSS) and Pregnancy Nutrition Surveillance System, Healthy People 2010, county specific focus groups, publications and online

material, public feedback via the web, field epidemiologists, and ISDH personnel. Regional surveys were used to fill gaps, including state data regarding hospitals, birthing centers, health care professionals available, etc.

The strengths of the current methods of data collection analysis for the current Needs Assessment are that it will provide the most accurate and inclusive data available as well as perspectives from many sources. The weakness of the current method is the lack of an integrated statewide collection and analysis system.

## 2. Needs Assessment Partnership Building and Collaboration

Facilitation of committees, participation on committees and task forces, good communications with key contact people and financial support are the methods Maternal and Children's Special Health Care Services (MCSHC) staff use to build and enhance partnerships among other programs that work with the Maternal and Child Health populations within ISDH, other HRSA programs, other programs within ISDH, and other governmental agencies and other state and local public and private organizations. (Please see Table A—Needs Assessment Collaboration Survey Summary.)

Currently, most of the Title V programs (save Supplemental Security Income) are together in the same division. It is anticipated that this merge will improve partnerships especially between CSHCS and Genomics/Newborn Screening Services. The Adolescent Health Consultant directs the Indiana RESPECT (Indiana Reduces Early Sex and Pregnancy by Educating Children and Teens) and meets with the other MCSHC consultants who provide program consultation to grantees providing direct and enabling services to the MCH populations. MCSHC funds the independent Title X family planning agency to provide monitoring and technical assistance to Title V funded family planning services. MCSHC consultants also participate in Healthy Start Board Meetings and provide consultation.

MCSHC consultants coordinate with other HRSA programs outside of MCSHC (Universal Newborn Hearing Screening and Genetics are part of MCSHC) as needed. Many Title V grantees are Federally Qualified Community Health Centers providing primary health care through HRSA support. Many times Title V funds enabling services like care coordination that will enhance the primary care. MCSHC consultants may provide technical assistance beyond the services funded by Title V, if asked or needed.

Initially, a Title V consultant was involved with the Chronic Disease Case Management Program which is an Office of Medicaid Policy and Planning (in FSSA) and ISDH collaboration to lower the cost to Medicaid by providing case management for Medicaid clients with congestive heart failure, diabetes, asthma, and stroke. Some Title V grantees incorporated the guidelines into their services. An MCSHC consultant participates in the immunization committee and all grantees treating children provide immunization. Because of MCSHC efforts to integrate data to develop the Indiana Birth Defects and Problems Registry and because MCSHC uses vital statistics regularly, several staff participate in agency data meetings that include vital statistics and epidemiology staff. The MCSHC Medical Director also provides medical direction to Newborn Hearing Screening and to the Department of Children's Services. Any injury prevention program that is promoted by the Injury Prevention Division is shared with Title V grantees.

MCSHC consultants are currently working on several grants shared between agencies. The Prenatal Substance Use Prevention Program is funded by the Center for Substance Abuse Prevention through Mental Health funds in FSSA, Indiana Tobacco Prevention and Cessation, and Title V. The Early Childhood Coordinated Systems grant partners ISDH MCSHC with several FSSA divisions and the Department of Education as well as other agencies within and outside of state government. The Child Care Health Consultant program partners MCSHC with

FSSA yet again. The completion of the Youth Risk Behavior Survey is a collaboration between MCSHC and the Indiana Department of Education. Universal Newborn Hearing Screening program in the Genomics/Newborn Screening Section provides grant money to the Indiana School for the Deaf to assist with the implementation of the program and collaborates with First Steps Early Intervention in FSSA. MCSHC also collaborates with the Indiana Department of Environmental Management (IDEM) to develop the state's capacity to address asthma and support the Indiana Joint Asthma Coalition (InJAC).

Different programs within MCSHC partner with state public and private organizations. Genomics/Newborn Screening Section works closely with March of Dimes, Purdue Extension Service, Indiana Parent Information Network, Indiana Perinatal Network, Inc., and other special needs support groups in the areas of genomics, newborn screening, folic acid campaign and others. The Indiana Genetics Advisory Committee has representation from several universities, families, support groups, and medical groups. The Indiana Hospital & Health Association representative sits on several advisory committees of the Genomics/Newborn Screening Section. Physicians organizations (e.g. Indiana Medical Association [IMA], Indiana Chapter of American Academy of Pediatrics [IAAP], Indiana Family Practice Association [IFPA]) are partners in implementing new guidelines and standards. MCSHC's Indiana Family Helpline (IFHL) has MOUs with the Indiana Minority Health Coalition (IMHC) to assist in IMHC establishing an IMHC Healthline in exchange for statistics and with the IN 211 Partnership Inc. to support and assist in implementing the 2-1-1 dialing code for human services referrals.

Title V's infrastructure building arm for perinatal health is the Indiana Perinatal Network, Inc. IPN's State Perinatal Advisory Board (SPAB) is the advisory and consensus-building group for the Indiana Perinatal Network (IPN). SPAB members represent all constituencies concerned with perinatal issues including American College of Obstetrics and Gynecology (ACOG), IAAP, nurse midwives, consumers and payors from all geographic regions of the state.

For this needs assessment, MCSHC is collaborating with IPN and Marion County Health Department in funding focus groups of primarily minority women of childbearing age to determine barriers that contribute to the minority disparity in pregnancy outcome. MCSHC is also funding IPN and the Indiana School of Nursing to facilitate town meetings to elicit similar information. MCSHC has collaborated with the ISDH Public Health Preparedness District epidemiologists by preparing a capacity survey for them to complete for each county with which they consult. These staff are also gathering names of interested contacts in each county who will be asked to assist in prioritizing needs in their county or district. Identifying and implementing evidenced-based activities to help meet priority needs will be done partially by staff and partially through the Title V RFP effort.

Indiana's assessment of the availability of care has benefited enormously from a multi-year collaborative initiative to collect data on the numbers and distribution of health care professionals. Although fiscal constraints have sometimes interfered with consistent data collection efforts, Indiana has nonetheless been able to gather comprehensive data on selected health care professionals, including geographical and specialty distribution. In 1997 and 2001, data were collected on physicians and registered nurses in conjunction with health professional license renewal. In 1998, data were collected on dentists and dental hygienists. These data were

used to help determine health care professional shortages. In addition, data books describing professional and demographic characteristics and geographical distribution for these health care professionals were published subsequent to the surveys. Data were also used to document Indiana's need for such programs as the Health Professional Loan Repayment Program and the Indiana Area Health Education Center (AHEC).

Fiscal constraints interfered with data collection efforts between 2001 and 2003. But the effort to gather health professional data related to availability of care picked up speed in 2003, when Indiana initiated electronic license renewal for selected health professional groups. This technological improvement provided an opportunity for lower-cost electronic surveys in conjunction with health professional license renewal cycles. Electronic surveys were conducted in 2003-2004 for physicians, registered nurses, dentists, dental hygienists, social workers, clinical social workers, marriage and family therapists, mental health counselors, psychologists, pharmacists, physician assistants and licensed practical nurses. As in past paper surveys, the electronic surveys focused on the professional, demographic and geographical information needed to support assessment of the availability of care. Substantial proportions of professionals chose to renew their license electronically and the vast majority of these professionals (approximately 74 percent) responded to the electronic surveys. As more computer-literate professionals join the workforce, it is expected that e-renewal and e-survey response rates will rise.

The 2003-2004 data are currently being analyzed. Workshops on the use of the data to assess needs have been held for ISDH and Indiana Primary Health Care Association (IPHCA) staff, as well as licensing boards and professional associations. In the coming years electronic versions of the surveys will be continued as long as funds are available.

In recent years, ISDH and IPHCA have closely partnered in the effort to assess Indiana's needs. ISDH has forged a contractual relationship with IPHCA that provides ISDH with additional staff support for health professional shortage area determination. This enhanced partnership, combined with the electronic survey data and workshops, has considerably strengthened ISDH's ability to detect counties in need of specific types of health care professionals and to profile the services health professionals currently provide. Funding constraints may limit this collaboration.

The results of these collaborations provided MCSHC with more reliable local capacity information and physician availability information than we have had in past needs assessments. Through the Community Conversations (forums) and focus groups, the participating partners have gathered more specific information related to perception of care than previously obtained. As these data are further analyzed, it is hoped that it will give direction to needed interventions. There is a networking result that comes from such collaboration in which programs working with the same population reconnect, perhaps with new staff, and begin working more closely together.

The strengths of such collaboration are knowledge of programs and agencies and contacts that are made which can lead to improvements in services both in the short and the long run. The weaknesses of such collaborations can be data overload—so much data that one can't determine the issues—and, because of group dynamics and bureaucracy, a slowing of the process of developing or implementing interventions.

**Table A:** **Needs Assessment Partnership Building and Collaboration Summary**

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| CSHCS | | | **Collaborating agency:** FSSA/Office of Medicaid Planning & Policy. **MCH population**: CSHCN, Pregnant Women, Mothers/Women, Infants, Children 1-11, Children 12-21. **Results**: Collaboration with Medicaid's OMPP allows for Medicaid's and CSHCS's policies to be consistent with one another. This is important since CSHCS pays for medical services and devices only after Medicaid has been considered and/or accessed by a family. **Strengths:** Consistency and fairness to clients on one or both programs. **Weaknesses**: One programs changes—particularly cost-cutting measures—can affects the other program.<br><br>**Collaborating agency:** FSSA/DFC's First Steps Program. **MCH population:** CSHCN, Children 1-11 | **Collaborating agency:** Riley Hospital for Children **MCH population:** CSHCN, Infants, Children 1-11, Children 12-21. **Results:** Riley provides an on-site location for taking CSHCS applications, and increases awareness about the program. **Strengths:** Excellent reputation of Riley Hospital. **Weaknesses:** Unknown. | |

| | | | | | |
|---|---|---|---|---|---|
| | | | **Results:** Combined enrollment form for First Steps and CSHCS; First Steps sites used as enrollment sites for CSHCS.<br>**Strengths:** Increased presence in local communities for CSHCS; easier access to program for families far from Indianapolis.<br>**Weaknesses:** Need for greater communication between First Steps and CSHCS on policy issues. | | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Adolescent Health (YRBS, RESPECT) | **Collaborating agency:** Adolescent Health Training Program (AHTP)<br>**MCH population:** Adolescents and professionals who serve them.<br>**Results:** Assistance from AHTO in evaluation of some programs.<br>**Strengths:** Academic assistance with programs.<br>**Weaknesses:** Not many students and faculty interested in public health. | **Collaborating agency:** Coordinated School Health Intra Agency Work Group<br>**MCH population:** All school age children<br>**Results:**<br>**Strengths:** Opportunity to share information/updates with ISDH programs focusing on the same population<br>**Weaknesses:** Difficulty in getting all members to attend regularly; groups meets quarterly. | **Collaborating agency:** CDC sponsored Youth Risk Behavior Survey performed in conjunction with the IN Dept. of Education (DOE)<br>**MCH population:** Teens grades 9-12<br>**Results:**<br>**Strengths:** Participation in national survey resulting in weighted data<br>**Weaknesses:** Very time consuming and difficult to gather weighted data.<br><br>**Collaborating agency:** HHS' Administration for Children (ACF) and Families Title V Section 510 Abstinence Education Block Grant.<br>**MCH population:** Children age 10-24<br>**Results:**<br>**Strengths:** Funding provides abstinence education to community grantees throughout the state and a media marketing campaign<br>**Weaknesses:** Funding stream delayed due to reassignment to ACF from MCHB; policy changes may change the availability of future funding. | **Collaborating agency:** MZD, Inc. (advertising agency)<br>**MCH population:** Youth 10-21 and their parents<br>**Results:**<br>**Strengths:** new media campaign to be developed promoting abstinences and teen pregnancy prevention .<br>**Weaknesses**: Concern regarding funding from ACF. | **Collaborating agency:** DOE sponsored, Coordinated School Health Advisory Council<br>**MCH population:** All school age children<br>**Results:**<br>**Strengths:** Opportunity to share information/updates with statewide programs focusing on the same population.<br>**Weaknesses:** Difficulty in getting all members to attend regularly<br><br>**Collaborating agency:** State Adolescent Health Coordinators Network<br>MCH population: **Adolescents, 10-24**<br>**Results:**<br>**Strengths:** Regional and national organization focused on population; the group meets in person annually and teleconferences quarterly; provides great support/training opportunities- particularly for new staff.<br>**Weaknesses**: Funding for the annual meeting was cut and the states will have to make up the difference in travel costs for the first time this year. |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local pub. and priv. org. | Advisory Boards |
|---|---|---|---|---|---|
| PSUPP | | **Collaborating agency:** MCH and WIC<br>**MCH population:** Women of childbearing age.<br>**Results:**<br>**Strengths**: 1) MCH funding of 3 PSUPP clinics. 2) Pregnant women referred to PSUPP by the MCH and WIC clinics to terminate use of alcohol, tobacco & drugs (ATOD) during pregnancy. Attempts to maintain non-use with tobacco.<br>**Weaknesses:** MCH should provide PSUPP services in all MCH clinics. | **Collaborating agency:** Division of Mental Health (DMH) and Indiana Tobacco Prevention & Cessation (ITPC) Agency.<br>**MCH population:** Women of childbearing age.<br>**Results:**<br>**Strengths:** Funding received to support PSUPP clinics: 7 from the Indiana Division of Mental Health and 4 from the Indiana Tobacco Prevention & Cessation Agency.<br>**Weaknesses:**<br>1) Need increase in funds to support present clinics and expand. 2) Women not following with commitment to terminate/decrease ATOD | **Collaborating agency:** Thirteen (13) agencies that house the PSUPP clinics.<br>**MCH population:** Women of childbearing age<br>**Results:**<br>**Strengths:** All of these agencies provide in-kind financial support to the clinics.<br>**Weaknesses:** None | |
| Free Pregnancy Test Program (FPT) | | | | **Collaborating Agencies:** 105 not-for-profit status, local, and public agencies;<br>**MCH population:** sexually active women of child-bearing age;<br>**Result:** 105 agencies in 64 counties are participating, and FY 04 there were 17,282 clients (13,547 unduplicated) seen.<br>**Strengths:** Free supply of Pregnancy Test Kits, data is being collected, and help is always available;<br>**Weaknesses:** Agencies do not have computer hardware/software and data entry personnel to participate. | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Perinatal Health / FCC/ PNCC | | **Collaborating agency**: HIV<br>**MCH Population**: Pregnant women<br>**Results**: PNCC now educates all clients on need for HIV test and consent form. Perinatal Newsletter ran a whole page on HIV in pregnancy. Will work together on trainings of perinatal staff at local levels.<br>**Strengths:** both departments work well together. We are both focusing on the same population.<br>**Weaknesses**: none<br><br>**Collaborating agency**: Lead<br>**MCH Population**: Pregnant women<br>**Results**: MCH perinatal consultant provided training on prenatal lead poisoning at Lead state conference. As a result Lead piloted testing of pregnant women through WIC clinics. Some cases of prenatal lead poisoning were found. MCH is funding a project in St. Joseph county to test all pregnant women through WIC, provide home follow-up, and test newborn. In addition in collaboration with IPN educational materials and | **Collaborating agency**: OMPP<br>**MCH Population**: Pregnant women, infants and children<br>**Results**: together developed a new Prenatal Risking tool that is sensitive to psychosocial issues. Working with Medicaid Managed Care Organizations to educate them on PNCC and FCC. Working on a new rule and common contract language for local care coordinators<br>**Strengths:** Medicaid has been very receptive, interested in –preserving care coordination programs.<br>**Weaknesses**: MCOs move slowly. Politics between state agencies can slow down process. | **Collaborating agency**: NASW<br>**MCH Population**: Pregnant women<br>**Results**: NASW has been providing the education and certification of PNCCs since 1990 without a contract from OMPP. The collaboration with OMPP/MCOs has spur headed the reorganization of the training to a 2 day training with test. NASW's New director is very enthusiastic about making changes and keeping the contract. An advisory committee developed the new training which has been tested twice with good results. MCH Perinatal consultant now teaches the class on the second day.<br>**Strengths:** both agencies work well together. NASW open to changes willing to do what it takes to keep the training. We are both focusing on the same population.<br>**Weaknesses**: Some agencies want the training removed from NASW due to cost issues and history of outdated information. ISDH not interested in taking on the training, IPN not able at this to provide the training. Contract | **Advisory board**: SIDS<br>**MCH Population**: Pregnant women, infants<br>**Results**: the name of the advisory has changed to reflect the changing MCH focus from just SIDS to all infant death prevention and bereavement. The new name is the Community Council on Infant Health and Survival.<br>A statewide conference on infant survival and bereavement was put on October 6th with excellent attendance and great reviews.<br>A new letter to parents with an unexpected infant loss has been developed and will be sent out shortly. The Advisory council will be working on legislation for mandatory training of child care workers on safe sleep. The group will be identifying resources in local communities and assisting with a training for communities where there is a gap.<br>**Strengths:** All on the council are dedicated and have been on the council since its inception 12-14 years ago.<br>**Weaknesses**: All on the council are dedicated and have been on the council |

| | | | | | |
|---|---|---|---|---|---|
| | | physician training materials will be developed and used statewide.<br>**Strengths:** both departments work well together. We are both focusing on the same population.<br>**Weaknesses**: New lead staff not aware of what MCH is doing causes some duplication. | | trainers are not always as up-to-date as they should be. Need to require PNCC trainers to be credentialed and to receive up-to-date training themselves. | since its inception 12-14 years ago. Existing members reluctant to change. New members have provided new energy.<br><br>**Advisory boards**: State Perinatal Advisory Board (SPAB)<br>**MCH Population**: women of childbearing age, Pregnant<br>Women, and infants.<br>**Results**: The State Perinatal Board gives time, resources and consensus to MCH issues. The SPAB also plays a part in the MCH AMCHP program reducing perinatal disparities as one of the home teams.<br>**Strengths:** experts and professionals from all over the state attend SPAB meetings and give input into MCH issues.<br>**Weaknesses**: Need broader participation from rural counties and minorities. |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local pub. and priv. org. | Advisory Boards |
|---|---|---|---|---|---|
| Health Systems Development (HSD) | | **Collaborating agency**: State Immunization Coalition:<br>**Population**: Child and adult<br>**Results**: State Wide Immunization Registry<br>**Strengths:** Indiana Registry is a National Model<br>**Weaknesses**: Limited participation statewide in the Coalition<br>**Collaborating agency**: Lead Poisoning Prevention Advisory Committee<br>**Population**: Child Health<br>**Results**: State Lead Elimination Plan.<br>**Strengths:** MCH clinics screen for lead poisoning.<br>**Weaknesses:** Difficult to attend meetings.<br><br>**Collaborating agency:** WIC: Breastfeeding Coordinator<br>**MCH population:** Breastfeeding mothers<br>**Results:** Coordination of grant efforts for bf population, referral to special programs; and developing state breastfeeding plan with IPN, WIC, and MCH.<br>**Strengths:** Close proximity for conference calls and sharing of information;<br>**Weaknesses:** None | **Collaborating agency:** St. Joseph County Health Dept and Elkhart County Health Dept.<br>**MCH population:** MCH residents in those two counties, including their Prenatal Care Coordination Program staff.<br>**Results:**<br>**Strengths:** Build county wide infrastructure to address MCH indicators incl. infant mortality, LBW, prenatal care, etc.<br>**Weaknesses:** New to MCH-learning curve still in process<br><br>**Collaborating agency**: FSSA/ Indiana Head Start Partnership Multi-Agency Advisory Council<br>**MCH population:** Children<br>**Results:** Increased collaboration between state agencies/programs<br>**Strengths:** Regular participation by multi-agency members<br>**Weaknesses:** None | **Collaborating agency:** Grantees, incl. SEAL, Planned Parenthood,<br>**MCH population:** SEAL and Planned Parenthood is statewide, others grantees is specific counties.<br>**Results:**<br>**Strengths:** relationships are established with Health Development consultants.<br>**Weaknesses:** none<br><br>**Collaborating Agency:** The Southeast Family Investment Collaborative<br>**MCH Population:** Children and Family.<br>**Results:** Key players living in the community and businesses came together, identified problems facing the community and prioritized, developed plan, sought community resources available to address the identified problem.<br>**Strengths:** Representatives from the agencies (FSSA, DWD, DOC, ISDH) are always present to give suggestions during discussions, (community and outside). Community ownership projects identified to work on.<br>**Weaknesses:** Unable to bring together all bus-inesses in the geo. area to | **Advisory Board:** Newborn Hearing Screening Advisory Committee<br>**Population:** Infants<br>**Results**: Original draft and revisions of the NBHS Manual for hospitals.<br>**Strengths**: UNBHS program implemented in record time in Indiana and currently a leader in the field.<br>**Weakness:** Consistent System for follow-up for children who are at risk and children in need of services to assure that care is received in a timely manner.<br><br>**Advisory Board:** Children's Trust Fund Board<br>**MCH population:** Children<br>**Results:** Raising funds through sales of specialized license plates<br>**Strengths:** Collected funds are granted to deserving children-focused programs<br>**Weaknesses:** This plate design has not attracted the amount of funding won by other designs. I have not been contacted about any recent meetings of this group. |

| | | | | | |
|---|---|---|---|---|---|
| HSD con't. | | | | participate in the process.<br>**Collaborating agency:**<br>Healthy Child Care Indiana Partners group<br>**MCH population:**<br>Children<br>**Results:** Federal grant helped establish the Child Care Health Consultant Program<br>**Strengths:** Partners keep members informed of their programs<br>**Weaknesses:** Funding is decreasing. | |
| Newborn Screening (NBS) | | **Collaborating agency:**<br>MCH, CSHCS, WIC, Vital Statistics, Genetics Program, Early Intervention Services, Sickle Cell, UNHS, Meconium.<br>**MCH population**: Infants<br>**Results:** Collaborative efforts on NBS/genetics issues.<br>**Strengths:** Efforts to ensure early identification and intervention approach.<br>**Weakness:** Time consuming process to get data system in place. | **Collaborating agency:**<br>FSSA/Office of Medicaid Planning and Policy/First Steps.<br>**MCH population**: Infants<br>**Results:** First Steps tracks follows-up and provides intervention services to children identified with positive screening condition(s). ISDH works with Medicaid office on NBS fee increase issues. A new fee was put into effective 1/12/04.<br>**Strengths:** Collaborative efforts to ensure funding for timely follow up of infants identified with positive conditions.<br>**Weakness:** None | **Collaborating agency:**<br>Local health department, birthing facilities, IN Hospital&Health Association, March of Dimes, Riley Hospital for Children (2 medical follow-up programs).<br>**MCH population**: Infants<br>**Results:** Over 99% of the infants born in Indiana were screened for designated genetic conditions; all of the babies identified with one or more screening conditions were follow-up with treatment and/or early intervention services.<br>**Strengths:** Centralized follow-up system supported by community participation, great collaboration among statewide local and public agencies.<br>**Weakness**: Need for data integration (in process) and improved communication. | **Advisory Board**:<br>Indiana Newborn Screening Advisory Board.<br>**MCH population**: Infants<br>**Results**: Provide advice and guidance to program planning and policies.<br>**Strengths**: Strong professional representation.<br>**Weakness**: Lack of consumer and parent participation. More parents will present at the board in 2004. |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Newborn Hearing Screening | **Collaborating agency:** HRSA UNHS Grant CDC EHDI Grant **MCH population**: Infants **Results**: Funding provided to plan and implement regional outreach program and integrated data system **Strengths**: Received technical assistance through visits and conference calls. **Weakness:** None | **Collaborating agency:** MCH, CSHCS, WIC, Vital Statistics, Genetics, and other NBS programs (NBS, Sickle Cell, Meconium). **MCH population:** Infants **Results**: The UNHS/EHDI program was fully implemented within a very short period. **Strengths:** ISDH was allow to use exiting program resources; there was great collaboration in planning and implementing program. **Weakness:** Working through HIPAA regulations to obtain tracking data from CSHCS and WIC. | **Collaborating agency:** FSSA/Office of Medicaid Policy and Planning /First Steps, Indiana School for the Deaf (ISD). **MCH population:** Infants **Results:** Fist Steps tracks, follows-up and provides intervention services to children identified with hearing loss and/or at risk of late onset hearing loss. ISDH works with Medicaid office on NBS fee increase issues. The new fee was put into effective 1/12/04. ISDH works with ISD to implement audiological evaluation and reporting system. **Strengths:** Early identification and early intervention that prevent delayed language and speech development, which affect social, emotional, and academic development. **Weakness:** Getting hospitals to refer to First Steps and getting data from First Steps to assist ISDH with tracking. | **Collaborating agency:** Local health department, birthing facilities, IN Hospital&Health Association, March of Dimes **MCH population**: Infants **Results**: 98% of infants born in Indiana were screened for hearing impairment; **Strengths:** Community based regional program that makes assistance and services easily accessed by the public; early identification and early intervention that prevent delayed language and speech development, which affect social, emotional, and academic development. **Weakness:** Timeliness of sending tracking data from hospitals varies. Midwives are not currently screening due to lack of equipment. | **Advisory Board:** Indiana State Hearing Detection and Intervention Advisory Board **MCH population:** Infants **Results:** Provide advice and guidance to program planning and implementation. **Strengths:** Excellent representation from professional, administrators, parents and consumers. **Weakness:** Advisory committee is being restarted after staff changes. |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Sickle Cell Program | | **Collaborating agency:** CSHCS, WIC, Office of Minority Health, and Chronic Disease<br>**MCH population:** Infants, children & adults.<br>**Results:** In 2004, this program served:<br>Infants=1318<br>Children=214<br>Adults=234<br>**Strengths:** Funding received by CSHCS & Chronic Disease to support program.<br>**Weaknesses:** : Close collaboration is not continuous. Once the program is routine, collaborative meetings wane. | | **Collaborating agency:** 4 local and one statewide care coordination projects and Indiana Hemophilia and Thrombosis Center educational project provide the service for the Sickle Cell Program.<br>**MCH population:** Infants, children & adults<br>**Results:** In 2004, this program served:<br>Infants=1318<br>Children=214<br>Adults=234<br>**Strengths:** Community based clinics services easily accessed by the public.<br>**Weaknesses:** Because the families are responsible for contacting the projects and/or the hospitals for follow-up, not all infants with positive screens for hemoglobinopathies are able to be tracked to ensure a diagnosis is complete. Many cases are closed due to parent lack of response. | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Hemophilia Program | | **Collaborating Agency:** Program run by HIV/AIDS program because they use the same insurance coverage process. It is funded by MCSHC and Chronic Disease. **MCH population:** Infants, Children 1-21. **Results**: CSHCS and the Chronic Disease Program pays insurance premiums to Indiana Comprehensive Health Insurance Association. **Strengths:** Financial assistance. **Weaknesses:** Limited number of children can be served. | | | |
| Indiana Child Care Health Consultant Program (ICCHCP) | | **Collaborating agency:**: Childhood Injury Prevention Coalition **MCH population:** Children **Results**: Indiana Fireworks Injury Report; Improved Injury reporting by hospitals and ER's **Strengths**: Broad Statewide representation **Weaknesses**: Funding dependent on CDC. | | **Collaborating agency**: Healthy Childcare Indiana **Population**: Child health **Results:** Advice and direction on the ICCHCP program development **Strengths**: Most of the statewide organizations that are concerned with quality of child care are represented. **Weaknesses**: The organization has a very limited view of the scope of health care concerns for this group. | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Genomics Program | | **Collaborating agency:** Newborn Screening Program<br>**MCH population:** Children<br>**Results:** Collaboration has resulted in progress in integrating the data and procedures for tracking with the Indiana Birth Defect and Problems Registry and in shared expertise.<br>**Strength**: Involvement in each other's committees has provided shared expertise.<br>**Weaknesses**: Lack of routine collaboration.<br><br>**Collaborating agency:** Indiana Birth Defects Surveillance System<br>**MCH population:** Women/children<br>**Results:** Collaborating on a daily basis and achieving grant objectives of creating a Child Health Data Set from which early intervention for families of children with birth defects can be ensured.<br>**Strength:** IBDPR became part of MCH in 2003 and completing the data mart.<br>**Weakness:** Need to convert the contracted employees to state employees to assure ability to continue service | | **Collaborating agency:** Indiana Folic Acid Council<br>**MCH population:** Women<br>**Results:** 2004 "Folic Acid for Life" state teleconference.<br>**Strength:** Purdue University involvement/leadership role.<br>**Weakness:** Consensus is difficult with many council members and decision-making is slow.<br><br>**Collaborating agency:** March of Dimes (MOD).<br>**MCH population:** ALL<br>**Results:** Strengthening MCH's relationship with MOD through sharing resources.<br>**Strength:** Sharing same goals of birth defect education and prevention.<br>**Weakness:** Limited partnership due to lobbying activities of MOD.<br><br>**Collaborating agency:** National Birth Defects Prevention Network<br>**MCH population:** Women/children<br>**Results:** Sustaining and growing ISDH membership<br>**Strength:** Provides ideas | **Advisory board:** Indiana Genetic Advisory Committee (IGAC)<br>**MCH population:** ALL<br>**Results:** IGAC meets twice a year and is made up of ISDH internal members as well as appointed voting members.<br>**Strength:** Expertise of both professionals and consumers. Provides input on genomics program and genetics grant activities.<br>**Weakness:** Busy professionals do not always have the time to devote to IGAC subcommittee activities. |

| | | | | | |
|---|---|---|---|---|---|
| | | **Collaborating agency:** Genetics Implementation Grant Steering Committee: **MCH population:** Women/children **Results:** Keeping on track with grant objectives, getting new ideas for solving problems encountered. **Strength:** Spans many divisions within ISDH and outside contractors; diversity is a strength. **Weakness:** Finding time for meeting.<br><br>**Collaborating agency:** Data Integration Steering Committee **MCH population:** Children **Results:** Bringing the technical/IT component together with the ISDH Programs. **Strength:** Strategic planning. **Weakness:** Slow progress | | and assistance to IBDSS **Weakness:** Web-based with only one meeting per year<br><br>**Collaborating agency:** National Society of Genetic Counselors (Region IV) – Public Health Special Interest Group **MCH population:** All **Results:** Link to national organization provides important updates in the field. **Strength:** Very active organization with active members. **Weakness:** Small numbers of genetic counselors<br><br>**Collaborating agency:** Coalition of State Genetics Coordinators **MCH population:** All **Results:** Networking with other state genetics coordinators. **Strength:** Members with common interests in a very specific state position. **Weakness**: Not a very active group with email only contact with other members. | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Indiana Family Helpline (IFHL) | | **Collaborating agency:** WIC, HIV/AIDS, CSHCS, Public Relations, Minority Health, Immunization Program, Bioterrorism and many other ISDH programs.<br>**MCH Population:** Statewide<br>**Results:** In FY 2004, there were 28,117 calls taken.<br>**Strengths**: Provides a statewide information and referral service with the public.<br>**Weaknesses:** Need for more staff resources. | | **Collaborating agency**: IN 211 Partnership and the myriad of health and social service agencies that participate with the IFHL through training and accepting referrals.<br>**MCH population:** Statewide<br>**Results:** Expansion of the 2-1-1 call number for social service I & R to at least 50% of the population in Indiana and the improved knowledge of services available in IN<br>**Strengths:** Assistance in progressing toward accreditation and improving the quality of service of IFHL.<br>**Weaknesses:** | **Advisory Board:** MCSHC staff serves as Secretary on the Board and staff serve on the IN 211 Education subcommitee, and the data subcommittee.<br>**MCH population:** Statewide<br>**Results:** Staff is charged with ensuring the service will become statewide and that the quality of I&R in the state is improved.<br>**Strengths**: Ability to assist in improving the I&R services around the state.<br>**Weaknesses**: Uncertainty about commitment to IN 211 as an IN 211 Call Center. |
| Oral Health Division | **Collaborating agency**: HRSA Children's Oral Healthcare Access Program Grant .<br>**MCH population**: Title I Schools, Head Start<br>WIC, MCH Clinics.<br>**Results**: Promote sealant utilization, Healthy People 2010 Objective<br>**Strengths:** Funds the statewide SEAL mobile.<br>**Weaknesses**: None | **Collaborating agency**: CSHCS, WIC, MCH, Epidemiology Resource Center, Minority Health, Women's Health<br>**MCH population**: Population ≤ 21 years<br>**Results:** Education, prevention consultation<br>**Strengths:** Coordination of educational efforts.<br>**Weaknesses**: Resources. | **Collaborating agency:** Head Start, Family & Social Services Administration, Health Professions Bureau, Attorney General's Office, Office of Medicaid and Policy Planning, Hoosier Healthwise<br>**MCH Population**: < 21 years<br>**Results**: Consultation, investigation, direction to dental offices.<br>**Strengths:** Keeping Oral Health services in the forefront.<br>**Weaknesses**: None | **Collaborating agency:** Indiana Dental Association, Indiana Public Health Foundation, Indiana Primary Health Care Association<br>**MCH Population**: < 21 years.<br>**Results:** Collaboration, consultation<br>**Strengths:** Keeping Oral Health services in the forefront.<br>**Weaknesses:** None | **Collaborating agency**: Dental Advisory Panel, Oral Health Task Force, Council on Dental Public Health<br>**MCH Population**: < 21 years<br>**Results:** Collaboration, consultation, policy input<br>**Strengths:** Keeping Oral Health services in the forefront.<br>**Weaknesses:** None |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Grants Management | | | **Collaborating agency**<br>FSSA Healthy Families<br>**MCH population:**<br>Families<br>**Results:**<br>Provides training and technical assistance to family services providers who assist families at risk of child abuse.<br>**Strengths**: Ensured that health of the families was included in the family and program evaluations.<br><br>***Weaknesses:*** *Minimal annual report .* | **Collaborating agency:**<br>Local agencies that provide direct and enabling services through MCSHC grants and statewide not-for –profit and business groups who contract with MCSHC to provide population-base and infrastructure building services.<br>**MCH population:**<br>Mother, infants, pregnant women, children, children with special health care needs.<br>**Results:** 211 grants and contracts have been let as of 6/05.<br>**Strengths:** Expands the populations that are reached by the Title V funding.<br>**Weaknesses:** Not enough state staff to provide optimal supervision and consultation.<br><br>**Collaborating agency**<br>Purdue University Suicide Prevention Coalition.<br>**MCH population:**<br>Adolescent and youth<br>**Results:** NA<br>**Strength:** New program this year, no data yet<br>**Weaknesses:** None | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Data Analysis Section | **Collaborating agency:** Office of Medicaid Policy and Planning **MCH population:** All Medicaid-eligible persons within the population **Results:** Data is used as part of the Title V block grant application and used to assist in determining where best to focus limited resources. **Strengths:** Allows for continuing funding **Weaknesses:** Some data unavailable; working relationship is not as strong as needed. | **Collaborating agency:** Children's Special Health Care Services; WIC; Immunization; LEAD; PSUPP; Newborn Screening; all programs within MCSHC. **MCH population**: All **Results:** Data is used as part of the Title V block grant application and is used to help determine where best to focus limited resources. **Strengths:** Allows for continuing funding **Weaknesses:** Some program areas do not collect data in an easily analyzable format. | | **Collaborating agency:** Indiana State Police, Indiana Department of Education. **MCH population**: MCH adolescent population either arrested or truant; MCH population in school in Indiana. **Results:** Data is used as part of the Title V block grant application and is used to help determine where best to focus limited resources. **Strengths**: Allows for continuing funding. **Weaknesses**: ISP does not categorize race/ethnicity in the same way the Federal government does. | **Collaborating agency:** Data Integration Steering Committee (DISC). **MCH population**: All **Results**: Infrastructure building continues allowing for interface and integration among various programs both within and outside ISDH. This development is guided by the DISC. **Strengths:** Ability to correlate and use data in different ways from different programs; greater efficiency in assisting the MCH population. **Weaknesses**: It is a slow process to achieve each area of data integration within ISDH and externally. Some working relationships are not as strong as needed. |
| Family Planning | **Collaborating agency:** Indiana Family Health Council **MCH Population: Results:** Provides monitoring, training and technical assistance. **Strengths:** Much needed quality control **Weaknesses:** Some policies may appear to be contradictory, needs study. | | | **Collaborating agency:** Five local grantee agencies. **MCH population:** Women of childbearing age. **Results:** Serve 1153 clients in FY 2004. **Strengths:** Expand family planning services to low income women. **Weaknesses:** Resources to expand. | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Training and Education | | **Collaborating agencies:** Local Liaison Office (Health Depts. Nurse Managed Care Clinics), Maternal and Child Health, Women Infants and Children's program CSHCS, Chronic and Communicable Disease, Cultural Diversity & Enrichment, Immunization, HIV/STD office, Office of Primary Care, and Oral Health.<br>**MCH population:** Pregnant women, infants, children adolescents, women of childbearing age, and families.<br>**Results:** Thus far there have been 5 BMI trainings for grantees, 6 Bright Beginnings/Nutrition Childhood Obesity trainings, 7 Domestic Violence trainings and 5 Immunization trainings facilitated by this program.<br>**Strengths:** Ability of coordinating related training on issues common to all programs.<br>**Weaknesses:** Have not developed a regular training schedule. | | **Collaborating agency:** Any funded or non-funded health staff in state.<br>**MCH population:** Pregnant women, infants, children adolescents, women of childbearing age, and families.<br>**Results:** The training of staff on ISDH targeted health issues results in providing a continuity and standardization of information on statewide bases.<br>**Strengths:** Statewide training is provided on the same subject in a consistent manner.<br>**Weaknesses:** All areas of the state are not the same. | |

| MCH PROGRAMS | Other HRSA Programs | Programs w/i ISDH | Other Governmental Agencies | Other Statewide and local public and private organizations. | Advisory Boards |
|---|---|---|---|---|---|
| Asthma Program | **Collaborating agency:** Funded by CDC. **Population**:Children, adolescents, adults **Results:**State Asthma Plan developed with emphasis on data and surveillance, public education, health care provider education, children and youth including schools and child care sites, and environmental aspects of asthma control. | **Collaborating agency:** Office of Minority Health, Indoor Air, Women's Health, Coordinated School Health Program **MCH population:** Minorities and underserved, women, children in schools **Results:** Emphasis on minorities in State Plan. **Strengths:** Inclusion of diverse groups. **Weakness:** Has been difficult to obtain minority representation. | **Collaborating agency:** Indiana Department of Environmental Management (IDEM) has been a full partner. Medicaid, FSSA, Dept of Commerce, DOE have sent representatives to meetings. **MCH population:** All **Result:** Broad based plan. **Strength**: Entire section on environmental issues in asthma control. | **Collaborating agency:** Physicians, respiratory therapists, health professionals, consumers, environmental scientists, IHHA, IPHCA, InRural Health Assoc., IMHC,ITPC, InCoalition for Housing &Homeless Initiatives, IPIN, ALAInChapter, InAAP, InAFP,MCHD, IPHA, IKE, HEC, HUD, IPS, In School Board Assoc. **MCH population:** All **Results:** Broad-based plan. **Strengths:** Broad based plan **Weaknesses:** Need better communication | **Collaborating agency:** Indiana Joint Asthma Coalition (InJAC). **MCH population:** All **Results:** Broad-based plan. **Strengths:** Diverse group. **Weaknesses:** Need better communication. |
| Prenatal Care Coordination | | | **Collaborating agency:** Office of Medicaid Policy and Planning **MCH population:** Prenatal Population **Results:** Update and review Policies, administrative procedures, forms, and recommendations for prenatal care coordination. **Strengths:** **A**ll key stakeholders are at the table functioning as a committee during this process. This includes but is not limited to the three Managed Care Organizations involved with Indiana's Risk Base | | |

| | | | | | |
|---|---|---|---|---|---|
| | | | Manage Care Mandate, the National Association of Social Workers, Maternal and Child Health Division of ISDH, and the office of Medicaid Policy and Planning as previously stated.<br>**Weaknesses:** None of the above can legislate actual needed policy changes but can only recommend changes. | | |
| Early Childhood Comprehensive Systems | **Collaboration agency:** MCHB<br>**MCH pop**. - Infrastructure Building for children ages 0-5<br>**Results:** Strategic Plan developed.<br>**Strength**; Adequate funding.<br>**Weakness-**This is a new effort at both the state and federal level. | **Collaboration agency:** w/CSHCS<br>**MCH pop:** Children ages 0-5<br>**Results:** Strategic Plan<br>**Strength:** Greater impact on programs and increased efficiencies for CHSHC needs.<br>**Weakness:** None | **Collaboration agency-** FSSA: Dept. of Families and Children, Bureau of Child Development, Bureau of Family Support, Bureau of Family Preservation; Dept. Mental Health Admin.; OMPP. DOE; IDEM; IPIN; Indiana Assoc. Education Young Children; Head Start; Commission on Latino Affairs; DOC;<br>**MCH pop:** Children ages 0-5<br>**Results:** Strategic Plan<br>**Strength**- greater impact on programs and increased efficiencies<br>**Weakness**: New state administration means new partnerships are to be developed. | **Collaboration agency:** Chamber of Commerce; Juvenile Justice Assn., Healthy Child Care Indiana; In Perinatal Assn.; In Institute on Disabilities and Community; Minority Health Coalition; AAP; Academy of Family Physicians; IACCRA; Infant and Toddler Mental Health Assn.; Step Ahead;<br>**MCH pop:** Children ages 0-5<br>**Results:** Strategic Plan<br>**Strength:** will increase efficiencies.<br>**Weakness**: May be impacted by Head Start Reauthorization bill pending in the House and Senate. | **Advisory Board:** This is a cross cutting integration planning project intended to incorporate all those involved in the education and care of children 0-5.<br>**MCH pop:** Children ages 0-5<br>**Results:** Strategic Plan.<br>**Strength:** Will increase efficiencies.<br>**Weakness**: May be impacted by Head Start Reauthorization bill pending in the House and Senate. |

## 3. Assessment of Needs of the Maternal and Child Health Population Groups

### Socio-Demographic Characteristics of Indiana

**The Geography of Indiana:** Indiana is bordered by Lake Michigan and Michigan in the North and by Kentucky in the South. On the east is Ohio and on the west is Illinois. Indiana has 92 counties (See Fig 8). Indiana land covers 35,867 square miles and a population density of 169.5 persons per square mile, compared to 79.6 persons per square mile for the U.S (U.S. Census 2000, U.S. Census Bureau) See Table 1.

**Table 1. Geography Quick Facts**

| Geography Quick Facts | Indiana | USA |
|---|---|---|
| Land area, 2000 (square miles) | 35,867 | 3,537,438 |
| Persons per square mile, 2000 | 169.5 | 79.6 |
| **Source:** U.S Census Bureau: State and County Quick Facts. | | |

**Indiana Population Estimates:** Based on the U.S. Census of Bureau 2003 annual population estimates Indiana has a population of 6,195,643. Of the 6,195,643-3,148,916 (50.8 percent) were females and 3,046,727 (49.2 percent) were males. Between 1999 and 2003, the total population grew by 4.25%.

For the year 2002 (latest data available), in Indiana, there were 1,312,372 women in the state of childbearing age of 15-44. Among women of childbearing age of 15-44 years, whites were 87.9 percent, blacks were 9.31 percent and others were 2.78 percent of the total. In 2002, 95,772 women became pregnant and 84,839 babies were born. Between 1999 and 2002, the number of women of childbearing age in Indiana declined by 0.5 percent.

Indiana is comprised of 92 counties. In 2003, the least populated county in the state is Ohio County in southern Indiana with 5,742 residents. The most populated one is Marion County in central Indiana with 863,861 residents. The vast majority of the state's population (71%) lives in urban settings. The five largest cities in the state are Indianapolis, Fort Wayne, Evansville, South Bend and Gary. Table 2 refers the 25 most populous cities in Indiana.

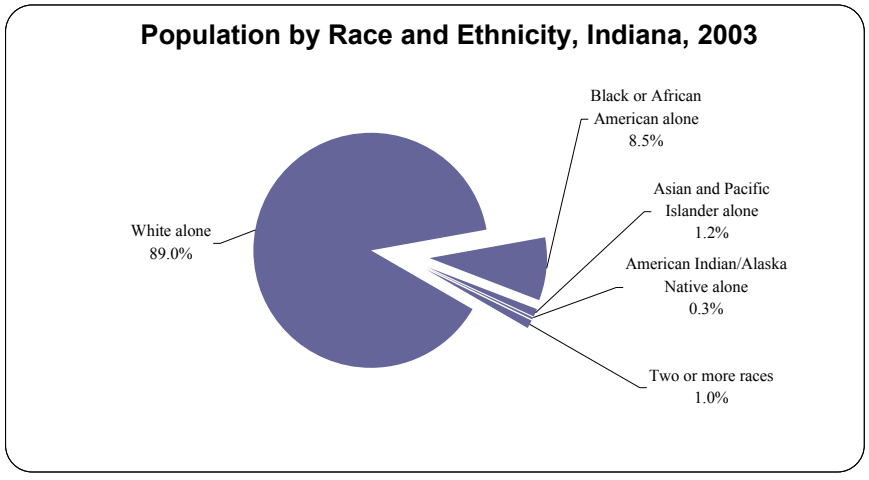
**Table 2: Indiana's 25 Most Populous Cities**

| Rank | City | County | Population |
|---|---|---|---|
| 1 | Indianapolis city | Marion | 783,438 |
| 2 | Fort Wayne city | Allen | 219,495 |
| 3 | Evansville city | Vanderburgh | 117,881 |
| 4 | South Bend city | St Joseph | 105,540 |
| 5 | Gary city | Lake | 99,961 |
| 6 | Hammond city | Lake | 80,547 |
| 7 | Bloomington city | Monroe | 70,642 |
| 8 | Muncie city | Delaware | 66,521 |
| 9 | Lafayette city | Tippecanoe | 61,229 |

| | | | |
|---|---|---|---|
| 10 | Anderson city | Madison | 58,394 |
| 11 | Terre Haute city | Vigo | 58,096 |
| 12 | Elkhart city | Elkhart | 51,682 |
| 13 | Mishawaka city | St Joseph | 48,396 |
| 14 | Fishers town | Hamilton | 47,790 |
| 15 | Kokomo city | Howard | 46,154 |
| 16 | Carmel city | Hamilton | 43,083 |
| 17 | Lawrence city | Marion | 40,795 |
| 18 | Greenwood city | Johnson | 39,545 |
| 19 | Columbus city | Bartholomew | 39,058 |
| 20 | Richmond city | Wayne | 38,201 |
| 21 | New Albany city | Floyd | 36,973 |
| 22 | Portage city | Porter | 34,915 |
| 23 | Noblesville city | Hamilton | 33,046 |
| 24 | Michigan City | La Porte | 32,335 |
| 25 | East Chicago city | Grant | 31,366 |
| **Source:** Stats Indiana, 2003. | | | |

**Racial and Ethnic Distribution:** Based on U.S. Bureau of Census 2003 estimates, Indiana's population is predominately white. For the people reporting race alone, 89 percent of the total population were white. The next largest racial group is blacks or African Americans, constituting 8.5 percent of the total population. As shown in Figure 1, the other racial groups each comprise approximately 1 percent or less of the Indiana population.

**Figure 1**



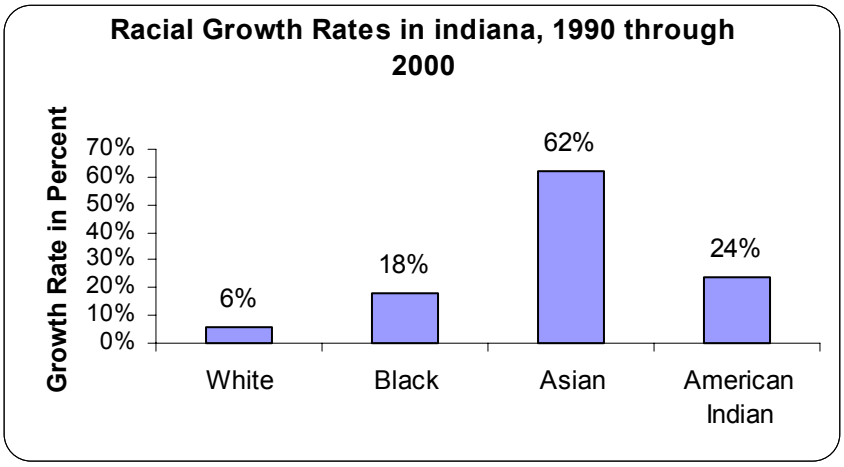

**Source:** 2003 Estimates, US Bureau of Census.

**Racial and Ethnic Growth Rates:** The largest increase among Indiana's population has been among the Hispanic ethnic group. From 1990 to 2003, the Hispanic population in Indiana grew from 98,788 to 242,518 people, a growth of 143,730 or 145.5%. In the 1990 census, the Hispanic population was only 1.8%, while in 2003, it was 3.9%. The counties that show the largest

growth in the Hispanic population include Marion, Lake, Elkhart, Allen, St. Joseph, Tippecanoe and Porter Counties. Despite the large increases, Hispanics still represent only a small portion of the overall population (3.9%).

Racial growth rates are shown in Figure 2. Asians had a rapid growth (62%) among minority race categories, and with Hispanics are responsible for Indiana's increased racial and ethnic diversity. This is in part due to migration of Hispanic population and relocation of white population.

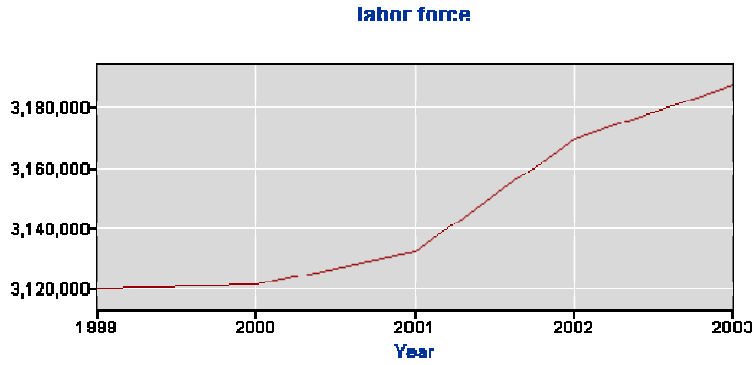
**Figure 2**




**Source:** Stats Indiana

**Indiana Labor Force, Employment, Unemployment and Unemployment Rate (Non Seasonally Adjusted):** Between 1999 and 2003, Indiana labor force increased from 3,120,036 (see technical note "c" below) to 3,187,734 (see technical note "b" below), a 2.2% increase (Fig 3). However, Indiana's employment steadily decreased from 3,025,725 (c) in 1999 to 2,996,097 in 2001(a 1% decrease); but this employment number rose to 3,024,367 in 2003 (Fig 4). At the same time, unemployment increased from 94,311 (c) to 163,367 (b), a 73% increase (Fig 5) and the unemployment rate increased from 3.0 to 5.1 (Fig 6).

**Figure 3: Indiana Labor Force, 1999-2003**

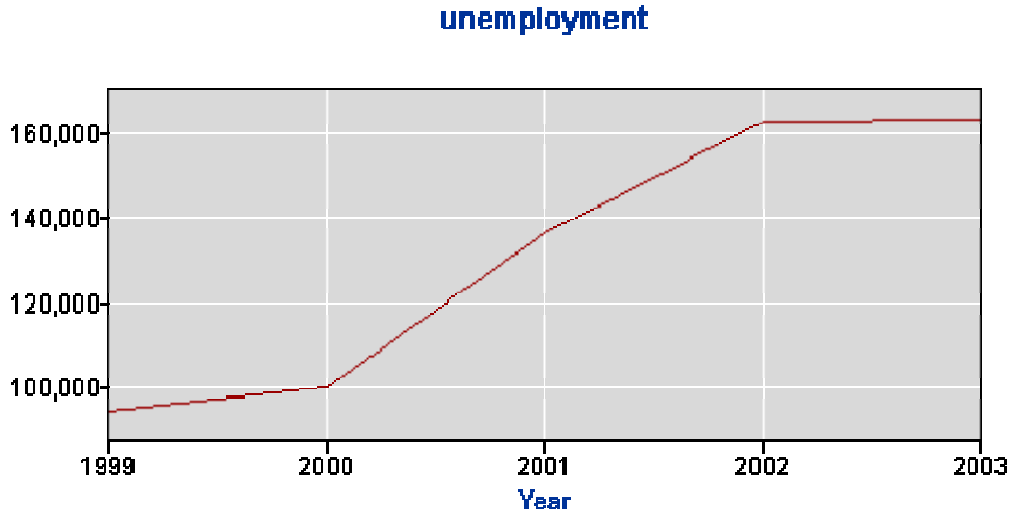



**Source:** US Bureau of Labor Statistics

**Figure 4: Indiana Employment, 1999-2003**

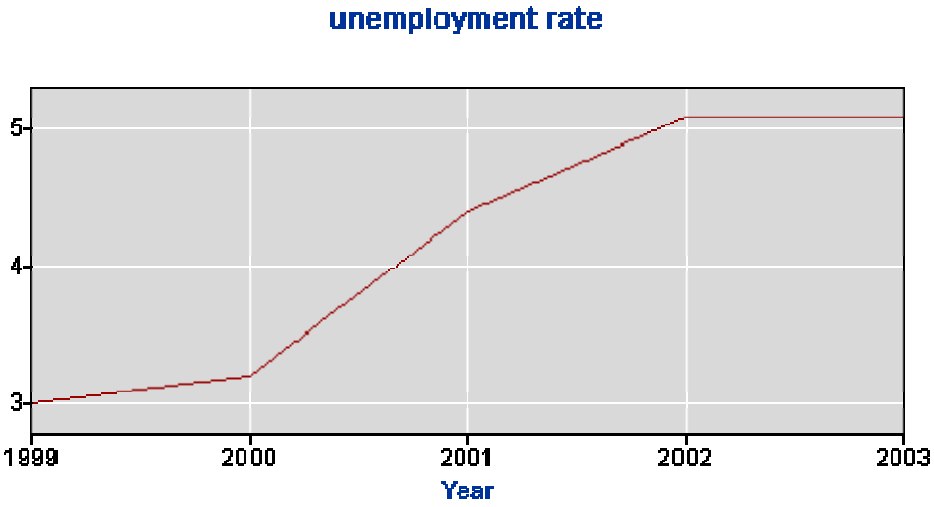

**Source:** US Bureau of Labor Statistics

**Figure 5: Indiana Unemployment, 1999-2003**




**Source:** US Bureau of Labor Statistics

**Figure 6: Indiana Unemployment Rate: 1999-2003**




**Source:** US Bureau of Labor Statistics

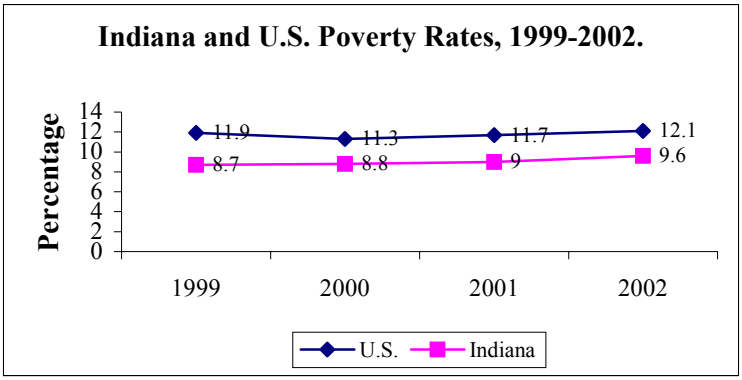
*Technical Notes:*
**Seasonally adjusted data is not available.*
*c: Adjusted to incorporate revised intercensal population controls for the 1990s*
*b: Benchmarked*
***Benchmarking**: The process of re-estimating statistics as more complete data become available. Estimates are usually calculated using only a sample of the universe (total count). Therefore, benchmarking allows for correction of estimating errors. Sub-state estimates are then forced to add to the individual state estimates. At the same time revisions are made to incorporate any changes in the inputs, such as revision in the current employment statistics based employment figures, corrections in UI claims counts and updated historical relationships. New benchmark levels are introduced on an annual basis.*
***Non Seasonal Adjustment rate**: Non-seasonal Adjustment rate estimates employment and unemployment without taking into account the effects of seasonal trends.*
***Seasonal Adjustment**: The statistical modifications to a data series such as employment rates. Statistical modifications allow for a better analysis of the more important underlying reasons for month-to-month changes in joblessness. Otherwise the predictable fluctuations in joblessness, such as the influences of weather, holidays, the opening and closing of schools, and other seasonal events will hide underlying joblessness trends that could be significant for interpreting an economic time series.*

According to the Indiana Department of Workforce Development State Unemployment Rate Report, released in October 2003 and revised in September 2004, Indiana's preliminary non-seasonally adjusted unemployment rate for October 2004 was 5 percent, up from September's 2004 4.8 percent mark. At the same time, the U.S non-seasonally adjusted unemployment rate was reported at 5.1 percent. Of Indiana's Midwest neighbors, Illinois reported 5.5 percent unemployment, Kentucky reported 4.5 percent unemployment, Michigan rate remained at 6 percent and Ohio recorded 5.8 percent unemployment for September 2004.

**Poverty:** The U.S. Census Bureau, with support from other Federal agencies, created the Small Area Income and Poverty Estimates (SAIPE). According to this report, Indiana has a lower poverty rate than the national average. In 2002, the Indiana poverty rate was 9.6 percent

compared to the national average of 12.1 percent. Between 1999 and 2002, Indiana's poverty rate steadily increased from 8.7 to 9.6 while the national poverty rate showed fluctuations and ended at 12.1 in 2002 (See Fig 8).

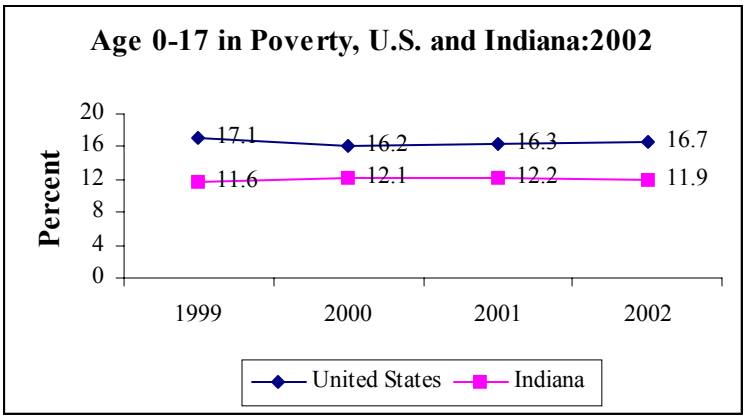
**Figure 3**




**Source:** U.S. Census of Bureau, Small Area Income and Poverty Estimates (SAIPE) program estimates, 1999-2002.

Children are more likely to be poor than the general population. Among persons under 18 years of age in 2002, the SAIPE estimated that 189,829 or 11.9% of Indiana children were poor. Between 2001 and 2002, Indiana poverty rates for children slightly decreased from 12.2 to 11.9, a 2.4% decrease, while the U.S. poverty rates for children slightly increased from 16.3% to 16.7%, a 2.45% increase (See Fig 9). Children under age 5 were most likely to be poor. Indiana poverty rate for children under age 5 was 14.5% while the national poverty rate for children under the age 5 was 19%.

**Figure 4**




**Source:** U.S. Census of Bureau, Small Area Income and Poverty Estimates (SAIPE) program estimates, 1999-2002.

**a. Women of Childbearing Age, Pregnant Women, Mothers and Infants:**
***Women of Childbearing Age (Mothers)***: Based on 2002 US Census Bureau estimates, women in Indiana account for just over one-half of the population (51%) and are primarily of childbearing age (41.8% of women are between 15 and 44 years of age). Among elderly, women comprise 59.3% (n= 449,311) of the population age 65 and over, whereas men are only 40.7% (n= 308,140) of the population age 65 and over.

Between 1999 and 2002, the total female population in Indiana increased from 3.05 million to 3.13 million, a 2.6% increase, the female population over 65 years and older increased from 443,480 to 449,311, a 1.3% increase and the female population of ages 15-44 years decreased from 1,318,940 to 1,312,372, a 0.5% decrease.

Most women in Indiana are white (88.8%). Blacks comprise of 8.7% of the female population and all others make up the rest (2.5%) of the female population. Between 1999 and 2002, the white and black female population of childbearing age (15-44years) decreased by 1.9% and 0.9% while the female population of other than white and black increased by 84.6% (see Table 3). In 1999 the females other than white and black consititute only 1.5% of the total females of ages 15-44 years; in 2002, they consitutute 2.8% of the total population. The rapid increase in the female population of other than white and black in recent years suggest the urgent need of the multilingual OB/GYN health care professionals.

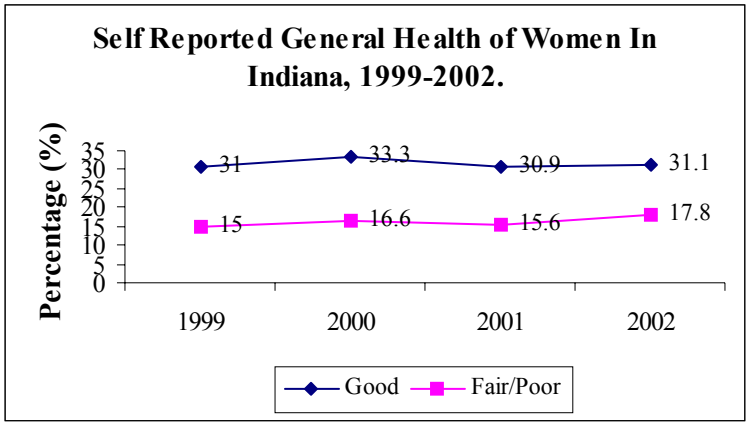
**Table 3. Population Estimates for Women of Childbearing Age. Indiana 1999 & 2002**

| Women of Childbearing Age (15-44years). Indiana. | 1999 | 2002 | % Change |
|---|---|---|---|
| Total | 1,318,940 | 1,312,372 | 0.5% decrease |
| White | 1,175,790 | 1,153,595 | 1.9% decrease |
| Black | 123,380 | 122,285 | 0.9% decrease |
| Others | 19,770 | 36,492 | 84.6% Increase |
| **Source**: Natality Reports 1999 & 2002. Indiana State Department of Health | | | |

In 2000, there were 47,587 marriages performed in the state of Indiana. The marriage rate was 8.6 per1000 population. The marriage rates for Indiana females of ages 15 and over was 21 per 1000 females and the unmarried rate is 48 per 1000 females (unmarried includes never married, divorced and widowed). Among all the Indiana counties, Steuben County (103.4), LaGrange County (87.5) and Brown County (84) had the highest unmarried female rates of ages 15 and over.

From the Indiana Behavioral Risk Factor Surveillance System between 1999 and 2002, the percentage of women reporting their health to be "good" remained almost the same at 31% while the women reporting their health to be either 'fair" or "poor" slightly increased from 14.7% in 1999 to 17.8% in 2002 (See Fig 10). Self reported health status is a broad measure of women's health. Many factors influence the women's health including health, income, education, family and work status.

**Figure 5**




**Source:** Indiana Behavioral Risk Factor Surveillance System: 1999-2002

Since chronic diseases such as obesity, heart disease, cerebrovascular diseases, cancer, diabetes, and chronic lower respiratory diseases account for 68% of all female deaths in Indiana, many Indiana women begin experiencing symptoms of these chronic diseases during the childbearing years. The following explores the morbidity of these diseases of Indiana's women of childbearing years.

Overweight and Obesity in Adult Women in Indiana: According to the 2002 Behavioral Risk Factor Surveillance System, 27.6% of females were overweight, 21.7% of females were obese, and 49.3% of the females were at risk of being overweight or obese. According to the 2001 CDC Pregnancy Nutrition Surveillance System, only 42.8% of the Indiana women participating in the 2001 WIC program were normal weight before pregnancy. In that year, 13.4 % were overweight and 29.2% were very overweight; 9.7 % were underweight and 4.9% were very underweight.

Healthy People 2010 goal is to reduce the proportion of adults (20 years and older) who are overweight or obese to 15%. The trends towards Healthy People 2010 Goal indicate that between 1999 and 2002, the overweight totals for females increased, the obesity totals for females increased, and the risk of being overweight or obese slightly decreased (See table 4). Indiana is not likely to reach the Healthy People 2010 goal of reducing the proportion of females who are overweight or obese to 15%.

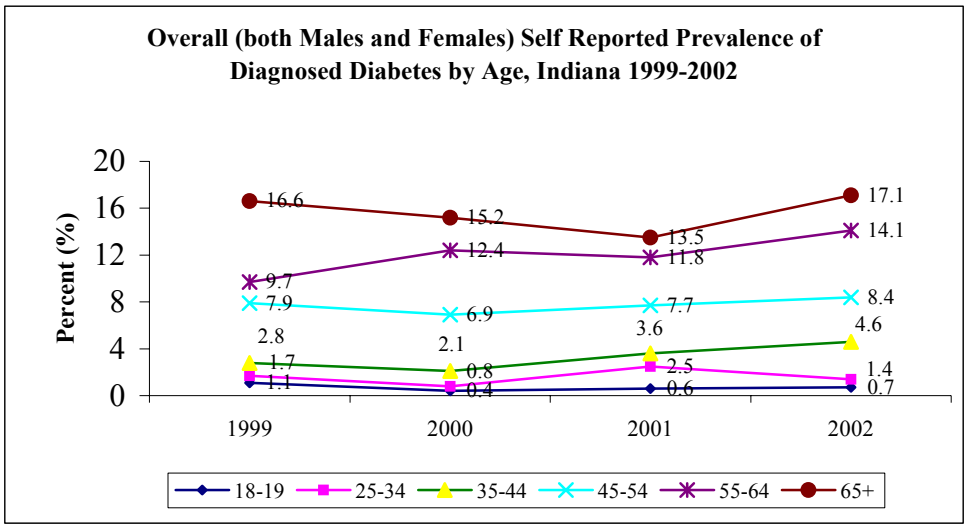
**Table 4**

| **Overweight and Obesity In Indiana females, 1999 through 2002.** | | | | |
|---|---|---|---|---|
| Year | 1999 | 2000 | 2001 | 2002 |
| Overweight | 24.9% | 27% | 27.1% | 27.6% |
| Obese | 19.8% | 20.4% | 23% | 21.7% |
| At Risk of being Overweight or Obese | * | * | 50% | 49.3% |

**Source:** BRFSS, Indiana State Department of Health.
**Note:** Body Mass Index (BMI) is calculated as weight in kilograms divided by the square of height in meters (W/H**2). A BMI between 19 and 24.9 is desirable. Overweight is defined as a BMI between 25 and 29.9, while obese is defined as a BMI of 30 or greater.
*Data not readily available.

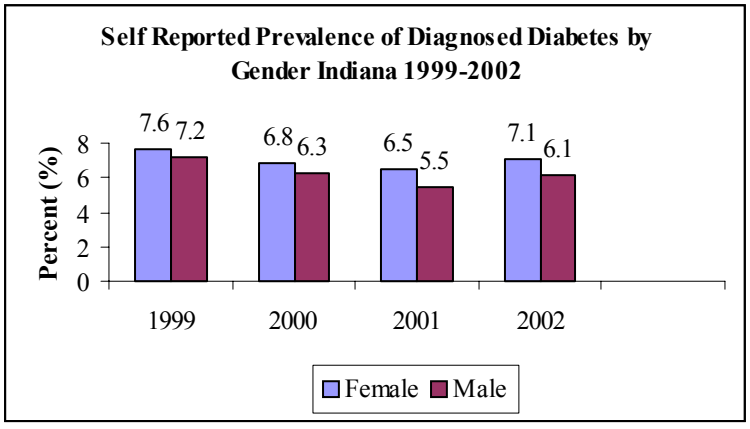
Diabetes in Women of Childbearing Age in Indiana: Indiana diabetes prevalence is above the national diabetes prevalence in the whole population. Based on 2002 BRFSS, the Indiana diabetes prevalence is 7% while the national diabetes prevalence is 6.4%. Diabetes prevalence increases with age. In the 2002 BRFSS survey, respondents were asked if a doctor ever told them that they have diabetes and the age group with the highest percent who answered yes to the question were of ages 65+. Self reported prevalence of diagnosed diabetes by age in Indiana between 1999 and 2002 are shown in Fig 6. For the age group 35-44 there was a steady increase in prevalence after 2000. Between 1999 and 2002, a greater number of females self-reported diabetes than males (See Fig 7).

**Figure 6**




**Source:** BRFSS
Percentages are weighted to population characteristics. Respondents answered "yes" to the question: "Have you ever been told by a doctor that you have diabetes"?

**Figure 7**




Source: BRFSS
Percentages are weighted to population characteristics
Respondents answered "yes" to the question: "Have you ever been told by a doctor that you have diabetes"?

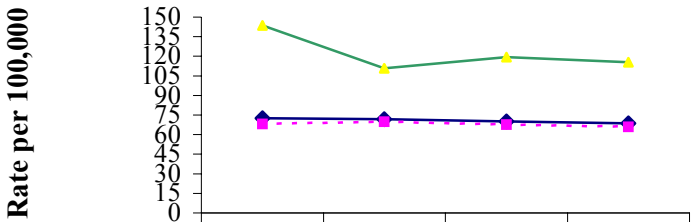
Diabetes is the 6th leading cause of death in Indiana. Based on 2002 Indiana death certificate data, a total of 4,757 individuals in Indiana (77.5 age-adjusted per 100,000 standard population) died due to diabetes. It accounts for 8.6% of the total deaths in Indiana. The Healthy People 2010 goal for diabetes related deaths is 45 age-adjusted per 100,000 standard population. To reach the Healthy People 2010 goal, the diabetes related age-adjusted death rate in Indiana must decrease by 42%. Although mortality rate from diabetes is higher for men (77.5 age-adjusted per 100,000 standard population) than for females (68.6 age-adjusted per 100,000 standard population), more females (n=2,530) died due to diabetes or its complications than males (n= 2,227).

Disparities exist in female diabetes death rates. Diabetes is the 6th leading cause of death in white women and the 4th leading cause of death for black women. Black female diabetes related age-adjusted death rate (115.4 per 100,000 standard population) is more than the white female diabetes related age-adjusted diabetes death rate (65.9 per 100,000 standard population) by 43%.

Female diabetes related age-adjusted death rates in Indiana slightly decreased over the four-year period (See Fig 8). Between 1999 and 2002, the overall female diabetes related age-adjusted death rates decreased from 72.7 per 100,000 standard population to 68.6 per 100,00 standard population; the white female diabetes related age-adjusted death rate decreased from 68.2 to 65.9 and the black female diabetes related age-adjusted death rate decreased from 143.6 to 115.4. To reach the Healthy People 2010 goal of diabetes related age-adjusted death rate of 45 per 100,000 standard population, the overall, white and black female diabetes related age-adjusted death rates should decrease by 34.4%, 31.7% and 61% respectively.

**Figure 8**

**Female Age-Adjusted Death Rate where Diabetes was the Underlying Cause of Death: Indiana, 1999-2002**




| | 1999 | 2000 | 2001* | 2002 |
|---|---|---|---|---|
| Total | 72.7 | 71.7 | 70.1 | 68.6 |
| White | 68.2 | 69.9 | 67.6 | 65.9 |
| Black | 143.6 | 110.9 | 119.3 | 115.4 |

* Rate was calculated using 200 population, to be consistent with the 2001 Mortality Report.

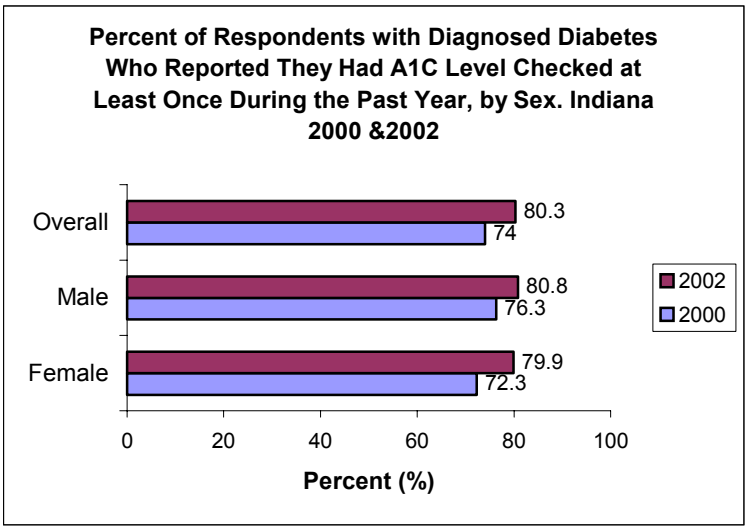
**Notes:** Rates are age-adjusted death rates. These rates were calculated using the 2000 standard million population, U.S. Bureau of Census.

**Source:** Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team

Another Healthy People 2010 goal is to reduce the diabetes related age-adjusted death rate among persons with diabetes to 7.8 per 1000 standard population. Between 2001 and 2002, the Indiana diabetes related age-adjusted death rates decreased from 9.1 per 1000 standard population to 8.1 per 1000 standard population, a 11% decrease. An additional 11% decrease is needed to reach the Healthy People 2010 goal.

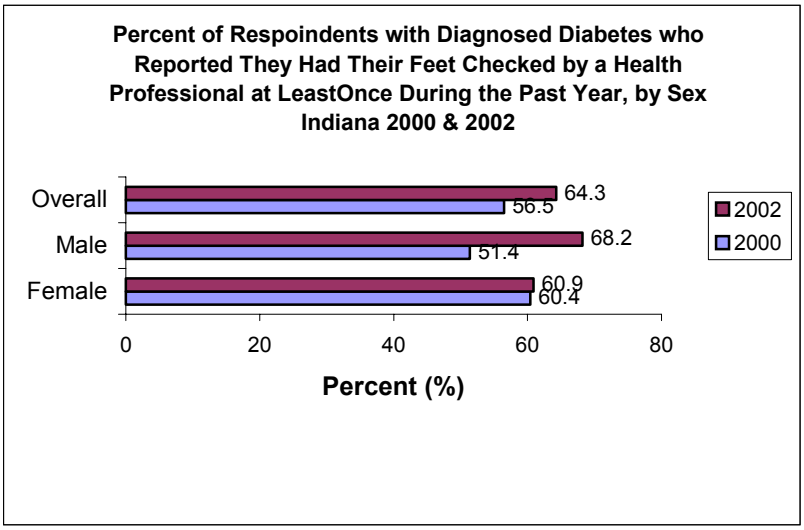
The awareness of self-management of diabetes care by the people with diabetes in Indiana is increasing. ISDH has been working with OMPP in the development of the Chronic Disease Case Management Program that focuses on Diabetes, Congestive Heart Failure, and Asthma. The following figures are based on BRFSS data. The understanding of the diabetes disease is increasing in the people with diabetes.

**Figure 9**



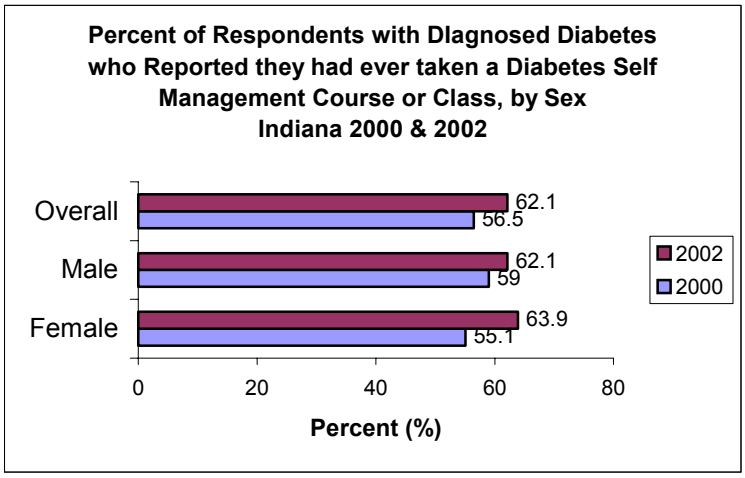

**Source:** Indiana BRFSS

**Figure 10**




**Source:** Indiana BRFSS

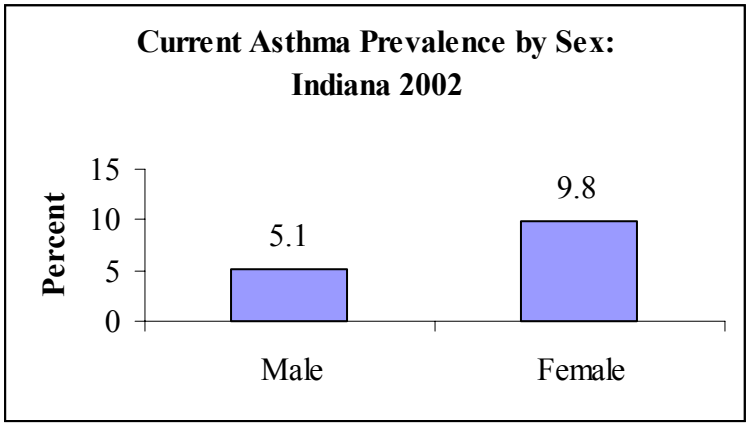
**Figure 11**




**Source:** Indiana BRFSS

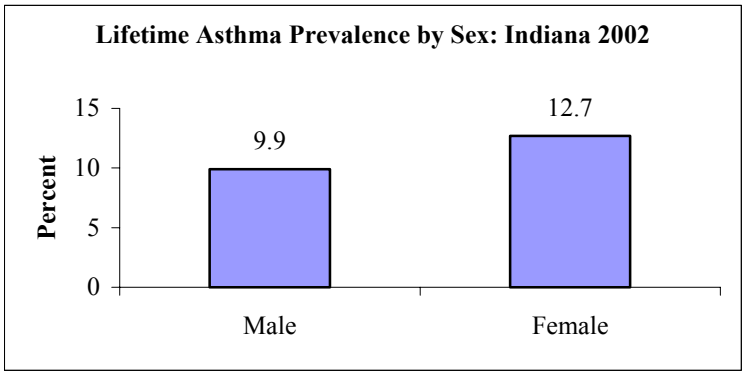
Asthma in Women of Childbearing Age: Asthma disproportionately affects this subgroup (adult women) population. According to the 2002 BRFSS survey, more than two thirds (77%) of the adults with the current asthma were women. Current asthma prevalence among adult women was 9.8%, nearly twice the 5.1% prevalence among adult men (See Fig 17). Hospitalization data showed the largest number of asthma hospitalizations among adults were women, ages 40-49. In the adults, ages 18 and over, 11.3% were told by a doctor, nurse or other health professional that they had ever had asthma. Females were more likely to report this condition than males (12.7% Vs 9.9%) [See Fig 12].

**Figure 12**




**Source:** 2002 Indiana BRFSS

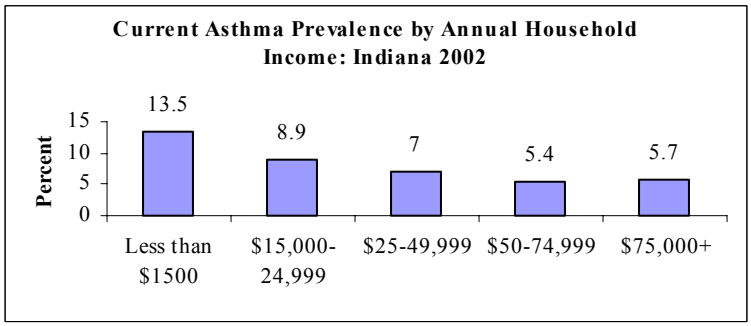
**Figure 13**




**Source:** 2002 Indiana BRFSS

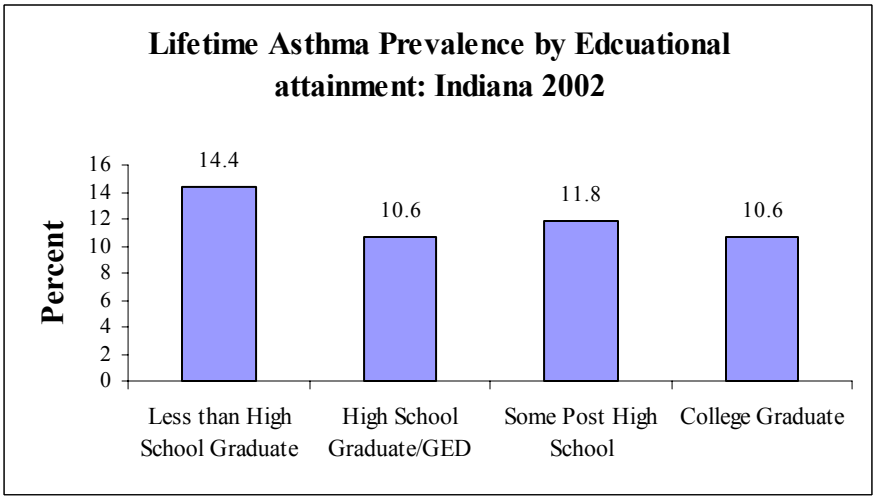
Individuals (18 and older) with household incomes below $15,000 reported having asthma nearly twice the rate as those with income $25,000-$49,000 and reported having asthma more than twice the rate as those with incomes of $50,000 or more (see Fig. 14). A greater number of unmarried (see Fig. 16), unemployed and individuals with less education (see Fig 15) reported having asthma than those who were married, employed or graduated from high school.

**Figure 14**



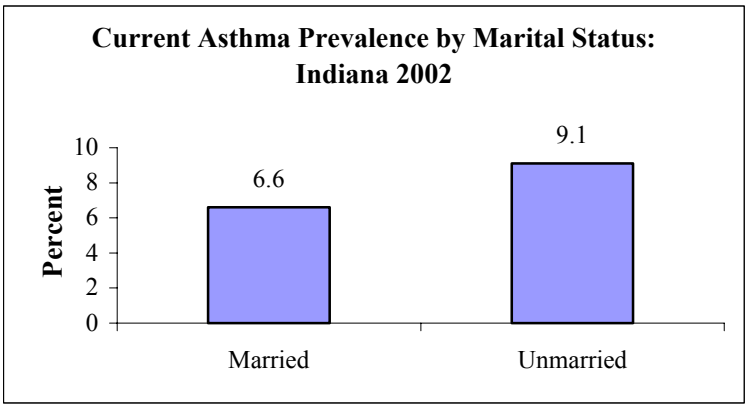

**Source:** 2002 BRFSS

**Figure 15**




**Source:** 2002 Indiana BRFSS

**Figure 16**




**Source:** 2002 Indiana BRFSS

Asthma causes serious health problems. According to 2002 BRFSS survey, adults with current asthma reported their health was very good or excellent at a rate 35% less than those without current asthma. Adults with current asthma reported feeling depressed every day and feeling stress more frequently than those without current asthma.

In 2002, more females (n=53) died in Indiana due to asthma than males (n=26). Adults of all ages have higher age-adjusted asthma death rates than children. Among adults, females have higher age-adjusted death rates (16.9 per one million population) than men (8.6 per one million population). Between 1999 and 2001, the female age-adjusted asthma death rate decreased from 21 per one million (n=64) to 14.2 per one million (n=44), a 32% decrease; however, this rate rose to 16.9 per one million in 2002. The white female asthma death rate for the year 2002 was 16.2 per one million (n=45). The black female asthma death rate was unstable (less than 20) and therefore not calculated.

In 2002, there were only 2 asthma deaths for the females of ages 15-34. In total, between 1999 and 2002 there were only 11 deaths recorded (See Table 5). Age-adjusted death rate for each year was unstable for this age group (less than 20) and therefore not calculated.

The 2002 female age-specific death rates for ages 35-64 was 18.4 per one million (See Table 6). Healthy People 2010 goal is to reduce the deaths from asthma in adults aged 35 to 64 years to 9 per million population. To reach the Healthy People 2010 goal, the female age-specific death rates for this age group should decrease by 51%.

The adult female age group of 65+ is the most vulnerable to asthma. This group had the highest number of deaths due to asthma. The 2002 age-adjusted female death rate for ages 65+ was 62.3 per one million. The Healthy People 2010 goal is to reduce the deaths from asthma in older adults aged 65 years and above to 60 per million population.

**Table 5. Number of Asthma Deaths by Age (Indiana 1999-2002)**

| **1999** | Number of Deaths | | | | **2001**** | Number of Deaths | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Female | White Female | Black Female | | Total | Female | White Female | Black Female |
| Age <5 | 3 | 0 | 0 | 0 | Age <5 | 2 | 1 | 1 | 0 |
| Age 5-14 | 4 | 0 | 0 | 0 | Age 5-14 | 0 | 0 | 0 | 0 |
| Age 15-34 | 10 | 3 | 0 | 3 | Age 15-34 | 3 | 2 | 1 | 1 |
| Age 35-64 | 28 | 16 | 8 | 8 | Age 35-64 | 25 | 16 | 11 | 4 |
| Age 65+ | 59 | 45 | 41 | 4 | Age 65+ | 33 | 25 | 21 | 4 |
| Total | 104 | 64 | 49 | 15 | Total | 63 | 44 | 34 | 9 |
| **2000** | Number of Deaths | | | | **2002** | Number of Deaths | | | |
| | Total | Female | White Female | Black Female | | Total | Female | White Female | Black Female |
| Age <5 | 0 | 0 | 0 | 0 | Age <5 | 2 | 0 | 0 | 0 |
| Age 5-14 | 4 | 1 | 0 | 1 | Age 5-14 | 3 | 1 | 1 | 0 |
| Age 15-34 | 10 | 4 | 2 | 2 | Age 15-34 | 6 | 2 | 1 | 1 |
| Age 35-64 | 31 | 18 | 10 | 8 | Age 35-64 | 34 | 22 | 19 | 3 |
| Age 65+ | 36 | 29 | 22 | 7 | Age 65+ | 34 | 28 | 24 | 4 |
| Total | 81 | 52 | 34 | 18 | Total | 79 | 53 | 45 | 8 |

**Source**: Indiana State Department of Health.
**Notes:** ** The 2001 rate was calculated using 2000 population, to be consistent with the 2001 Indiana Mortality Report

Cardiovascular Disease in Women of Childbearing Age: Heart disease is the leading cause of death in United States and in Indiana. Stroke is the third leading cause of death. Heart disease and stroke continue to be major contributors to increase health care costs.

Heart disease and stroke incidence rates are not reportable conditions to state or federal health agencies, thus the estimates of incidence and prevalence are found from other sources such as Behavior Risk Factor Surveillance System (BRFSS). Based on the 2002 BRFSS, 12% of the Indiana females and 8.8% of the white females of ages 18-44 years had ever been told they have coronary heart disease or stroke.

Further, 3.4% of the Indiana women of ages 18 and above reported being diagnosed with a heart attack or myocardial infarction, 4.1% had been diagnosed with angina or coronary heart disease and 2.4% had been diagnosed with stroke. More female respondents with heart disease reported having their first myocardial infarction (MI) at the age of 41-54 than age 65 or older (31.4% vs. 29.7%). Self reported prevalence of myocardial infarction; coronary heart disease and stroke are shown in Table 6.

**Table 6**

| **Prevalence of Mycardial Infarction, Coronary Heart Disease, and Stroke in Females of Ages 18 and Above; 1999-2002, Indiana** | | | | |
|---|---|---|---|---|
| | 1999 (%) | 2000 (%) | 2001 (%) | 2002 (%) |
| Myocardial Infarction | 4.1 | 4 | N/A | 3.4 |
| Angina or Coronary Heart Disease | 4.4 | 4.4 | N/A | 4.1 |
| Stroke | 2.3 | 2.6 | N/A | 2.4 |
| **Source:** Behavioral Risk Factor Surveillance System (BRFSS), Indiana State Department of Health | | | | |

Overall between 1999 and 2002, the myocardial infarction and coronary heart disease rates slightly decreased while the stroke rate fluctuated and ended slightly higher than in 1999.

Heart disease and stroke share several risk factors including tobacco use, high blood pressure, high blood cholesterol (low density lipoprotein or LDL) levels, physical inactivity, being overweight, having diabetes, aging, heredity and genetic history, history of previous heart attack, birth control use by women who smoke or have high blood pressure, menopause, and excessive drinking.

A number of studies have shown that life style interventions can help prevent high blood pressure and reduce high blood cholesterol levels. These interventions include increasing physical activity; limiting alcohol levels to moderate for those who drink; reducing salt and sodium intake and eating reduced fat diet high in fruits and vegetables.

Health professionals such as doctors, nurses, dieticians and nutritionists have a major role in educating patients regarding health risk behaviors. Respondents of 2002 BRFSS were asked if a doctor, nurse or other health professional had told them to eat fewer high-fat or high-cholesterol foods in the past year. Females were more likely to receive this advice than males (20.5% vs. 19.2%) [See Table 7].

**Table 7**

| Q. Within the past 12 months, has a doctor, nurse or other health professionals told you to eat fewer high fat/cholesterol foods? | | | |
|---|---|---|---|
| Gender | Yes (%) | No (%) | Unknown |
| Females | 20.5 | 79.2 | 0.3 |
| Males | 19.2 | 80.5 | 0.3 |
| **Source:** 2002 BRFSS, Indiana. | | | |

Respondents were also asked if a health professional had advised them to be more physically active. Respondents that received this advice were more likely to be females than males (See Table 8).

**Table 8**

| Q. Within the past 12 months, has a doctor, nurse or other health professional told you to be more physically active? | | | |
|---|---|---|---|
| Gender | Yes (%) | No (%) | Unknown |
| Females | 31.5 | 68.1 | 0.4 |
| Males | 28.2 | 71.6 | 0.1 |
| **Source:** 2002 BRFSS, Indiana. | | | |

Similarly, females were more likely than males to receive the advice of eating more fruits and vegetables (See Table 9).

**Table 9**

| Q. Within the past 12 months, has a doctor, nurse or other health professional told you to eat more fruits and vegetables? | | | |
|---|---|---|---|
| Gender | Yes (%) | No (%) | Unknown |
| Females | 28.6 | 71.1 | 0.3 |
| Males | 25.7 | 73.8 | 0.5 |
| **Source:** 2002 BRFSS, Indiana. | | | |

Taking aspirin regularly (every day or every other day) reduces the risk of heart attack and stroke. Approximately 29.1% of female respondents of age 35 and above reported taking aspirin daily or every other day. Of those respondents, 74.6% took aspirin to reduce the risk of heart attack, and 64.9% took aspirin to reduce the risk of stroke.

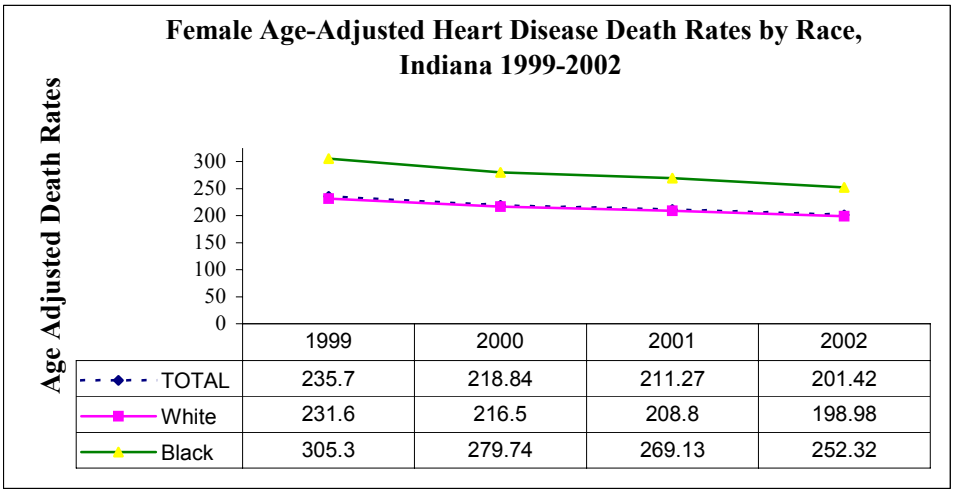
In 2002, more women in Indiana died of heart disease (n=7,826) than did men (n =7,353). Women died from heart disease at a rate of 210.42 deaths per 100,000 age-adjusted. Black females death rate (252.32 deaths per 100,000 age-adjusted) exceeded white females (198.98 deaths per 100,000 age-adjusted). Black to white disparity in women is 1.3. The Healthy People 2010 goal for this objective is 166 deaths per 100,000 age-adjusted. To reach the Healthy People 2010 goal, the total female heart disease age-adjusted death rate should decrease by 21.1%, the white female heart disease death rate should decrease by 16.6% and the black female heart disease age-adjusted death rate should decrease by 34.2%.

Between 1999 and 2002, there is a clear decrease in heart disease death rates for each of the female racial groups in Indiana. The white female heart disease deaths steadily decreased from 8,754 to 7,826, a 10% decrease and the black female heart disease deaths steadily decreased from 610 to 548, a 10% decrease (See Fig 22). Although age-adjusted heart disease death rates for both the races continue to decline each year, they did not reach the Healthy People 2010 goal.

In 2002, 2,338 (59.21 deaths per 100,000 age-adjusted) Indiana women died because of the cerebrovascular disease, a major form of which is stroke. Cerebrovascular age-adjusted death rates in females slightly increased from 67.1 deaths per 100,000 in 1999 to 69 deaths per 100,000 in 2000, however decreased to 59.21 deaths per 100,000 in 2002.

Between 1999 and 2002, the white female cerebrovascular age-adjusted death rates decreased from 65.8 deaths per 100,000 females to 58.44 deaths per 100,000 females and the black female cerebrovascular age-adjusted death rates decreased from 87.1 deaths per 100,000 females to 74.6 deaths per 100,000. Healthy People 2010 goal for stroke deaths is 48 deaths per 100,000 age-adjusted. None of the female racial groups reached the Healthy People 2010 objective.

**Figure 17**




**Source**: Indiana Mortality Report 1999-2002, Indiana State Department of Health

Malignant Neoplasm (Cancer) in Indiana's Women of Childbearing Age: Cancer is a disease that is characterized by the uncontrolled proliferation and spread of abnormal cells. Cancer is caused by external factors such as tobacco, chemicals, radiation, and infectious organisms and internal factors such as inherited mutations, hormones, immune conditions and mutations that occur from metabolism. Indiana age-adjusted female cancer incidence rate for the years 1996 through 2000 was 396.8 per 100,000, which is approximately 5.5 % lower than the national age-adjusted rate of 419.9 per 100,000.

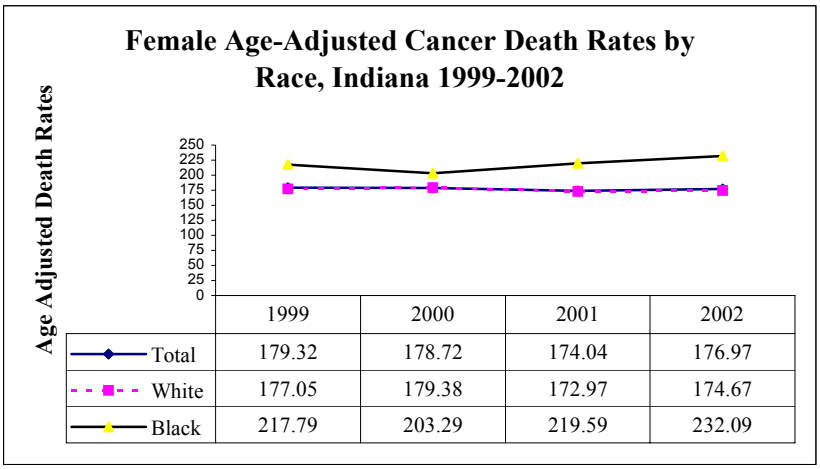
Malignant neoplasm (cancer) is the second leading cause of death in Indiana. In females these account for 21.9% of the total female deaths. In 2002, a total of 6,240 females in Indiana (176.97 per 100,000 age-adjusted) died of cancers. This rate was less than the 2002 national female cancer death rate (183 per 100,000 age-adjusted 2000 U.S standard population) by 3.3%. The Healthy People 2010 goal is to reduce the cancer deaths in females to 159.9 age-adjusted per 100,000 standard population. In order reach the Healthy People 2010 goal, the 2002 Indiana female cancer death rate should decrease by 9.6%.

Significant disparities exist in white and black female cancer deaths. According to the Institute of Medicine these disparities may be due to racial and ethnic disparities in health care, variables such as socioeconomic class, differences in risk factors, environmental conditions, religion and also cultural beliefs. In 2002, black female age-adjusted cancer death rate was 232.09, 24.7% more than the white female age-adjusted cancer death rates (174.61); that is, the risk of death for black women due to cancers was about 27.4% higher than that of white women. In order to reach the Healthy People 2010 goal, the white female cancer death rate must decrease by 8.4% and the black female cancer death rates must decrease by 31%.

The total and white female age-adjusted cancer deaths rates had fluctuations between 1999 and 2002 (See Fig 18). Overall, the total female age-adjusted cancer death rates decreased from 179.32 in 1999 to 176.97 in 2002, a 1.3 % decrease and the white female age-adjusted cancer death rates decreased from 177.05 to 174.67 a 1.3% decrease. Black female age-adjusted cancer

death rates decreased from 217.79 in 1999 to 203.29 in 2000, but then steadily increased to 232.09 per 100,000 standard population, an overall increase of 6.6% between 1999 and 2002.

**Figure 18**




| | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| Total | 179.32 | 178.72 | 174.04 | 176.97 |
| White | 177.05 | 179.38 | 172.97 | 174.67 |
| Black | 217.79 | 203.29 | 219.59 | 232.09 |

**Source:** Indiana Mortality Report, 1999-2002. Indiana State Department of Health

Lung Cancer in Women of Childbearing Age: The female lung cancer incidence in Indiana for the years 1996 through 2000 was 53.7 per 100,000 age-adjusted, slightly more than the national rate of 53.4 per 100,000. Lung cancer is the second leading cause of death in females. It kills more women every year than breast cancer (1,603 versus 913 between 1999 and 2002 in Indiana). In 2002, in Indiana, lung cancer accounts for 25.69% of all female deaths due to cancer (nationally, the rate was 25.69%). The Indiana female lung cancer age-adjusted death rate in 2002 was higher than the national rates (48.66 per 100,000 population versus 41.6 per 100,000 population).

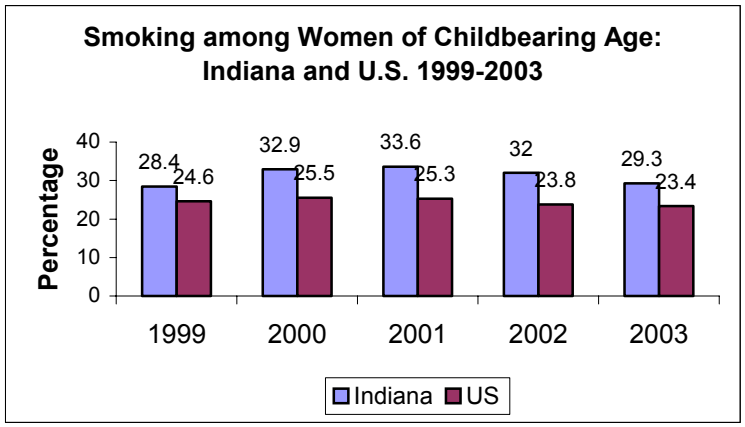
Black female age-adjusted lung cancer death rate (63.12 per 100,000) was higher than the white female age-adjusted lung cancer death rate (48.20 per 100,000) by 31%. Healthy People 2010 goal for lung cancer deaths is 44.9 age-adjusted per 100,000 standard population. In order to reach the Healthy People 2010 goal, the overall, white and black female lung cancer death rates should decrease by 7.7%, 6.8%, and 28.9%, respectively.

Risk factors for lung cancer include cigarette smoking, occupational and environmental exposures to substances such as arsenic, some organic chemicals, radon and asbestos, radiation exposure from occupational, medical, and environmental sources, air pollution, and tuberculosis.

The proportion of smoking among women of childbearing age in Indiana is consistently higher than the national average. In Indiana, in 2003, 29.3% of women of childbearing age (18-44 years) reported smoking, compared to 23.4% of women in the U.S. Between 2002 and 2003, the percentage of smoking in women of childbearing age in Indiana decreased from 32 to 29.3, a 2.7% decrease. The Healthy People 2010 goal is to reduce smoking in adults aged 18 years and over to 12%. To reach the Healthy People 2010 goal, the percentage of women of childbearing

age smoking in Indiana must be decreased by 59%. The Figure 24A illustrates the trends in percentage of smoking among women of childbearing age in Indiana and U.S.

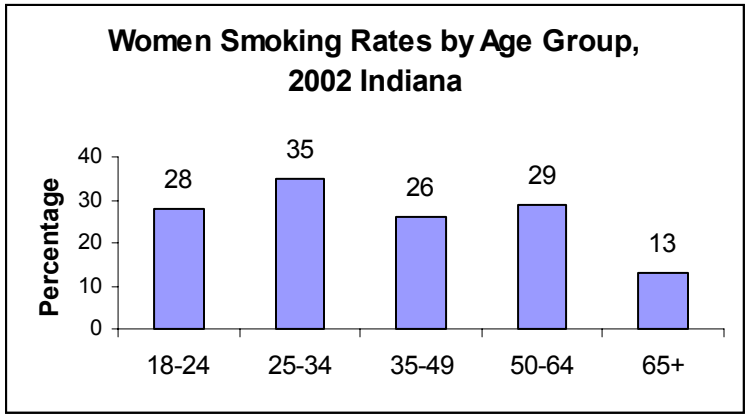
**Figure 24 A**




**Source**: Behavioral Risk Factor Surveillance System, March of Dimes
**Footnotes**: Smoking is defined as having ever smoked 100 cigarettes in a lifetime and currently smoking everyday or some days. Percent reported is among women ages 18-44

The Figure 24 B illustrates the Indiana women smoking by age. In 2002, the proportion of smoking among women age 25-34 is highest among women of all age groups at 35%.

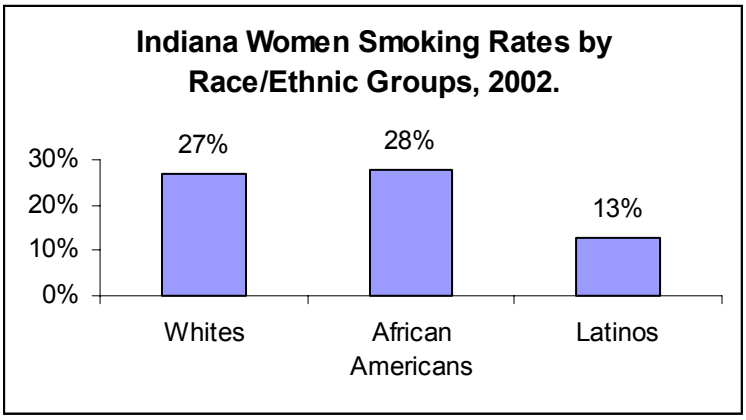
**Figure 24 B**




**Source:** Behavioral Risk Factor Surveillance System; Indiana Tobacco Prevention and Cessation.

In 2002 in Indiana, the smoking percentage among white and black women of all ages is 27% and 28%, respectively. These percentages are twice that of Latina women at 13% (see Fig. 24 C).

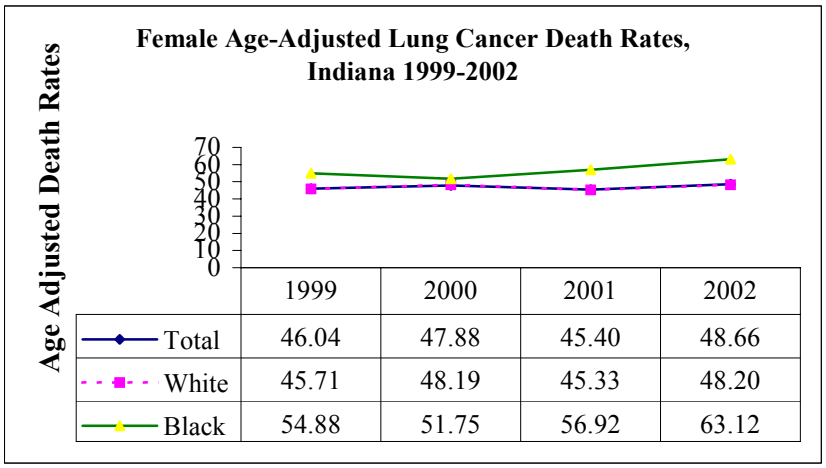
**Figure 24 C**




**Source:** Indiana Tobacco Prevention and Cessation,
2003 Indiana Behavioral Risk Factor Surveillance System.

There has been an increase in the female lung cancer death rates since 1999. Between 1999 and 2002, the overall female lung cancer age-adjusted death rates increased by 5.6%, the white female lung cancer age-adjusted death rates increased by 5.4% and the black female age-adjusted lung cancer death rates increased by 15% (See Fig 25). It is unlikely that Indiana reaches the Healthy People 2010 goal.

**Figure 25**




| | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| Total | 46.04 | 47.88 | 45.40 | 48.66 |
| White | 45.71 | 48.19 | 45.33 | 48.20 |
| Black | 54.88 | 51.75 | 56.92 | 63.12 |

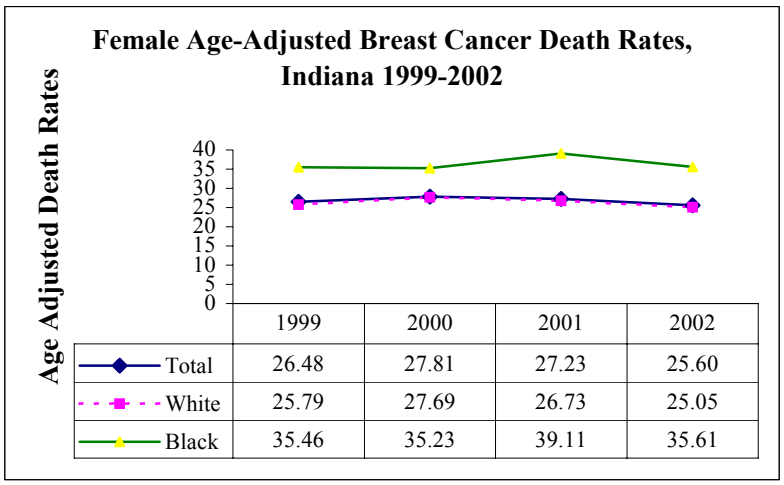
**Source:** Indiana Mortality Report, 1999-2002. Indiana State Department of Health

Breast Cancer in Women of Childbearing Age: The age-adjusted cancer incidence rate for female breast cancer for the years 1996 through 2000 was 124.8 per 100,000, which is approximately 5.2% less than the age-adjusted national rate of 131.7 per 100,000. Breast cancer stage at diagnosis among Indiana women was 15% in situ, 54% local, 25% regional, 4% distant, and 2% unstaged/unknown. Between 1996 and 2000, approximately 94% of women in Indiana who developed breast cancer were aged 40 and over compared to 95% in the United States. According to the latest data available, an estimated 4,700 new cases of breast cancer are expected to occur among women in Indiana during 2003.

Disparities exist. In Indiana and nationally, African American women are less likely to be diagnosed with breast cancer (112.8 vs. 126.1 cases per 100,000 women respectively). Also, African-American women were less likely to have their breast cancers diagnosed at an early stage (61.97% vs. 69.38% for Caucasian women).

In 2002, 810 females died due to breast cancer in Indiana. It accounts for 14.35% of all female deaths due to cancer. Mortality rate is 25.6 per 100,000 standard population and is same as the national rate (25.6 per 100,000 standard population). Significantly more black females die from breast cancer in Indiana than white females (See Fig 26). Healthy People 2010 goal for female breast cancer deaths is 22.3 per 100,000 females. In order to reach the Healthy People 2010 goal, the overall, white and black female cancer death rates should decrease by 12.9%, 11%, and 37.4%, respectively.

**Figure 26**




| | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| Total | 26.48 | 27.81 | 27.23 | 25.60 |
| White | 25.79 | 27.69 | 26.73 | 25.05 |
| Black | 35.46 | 35.23 | 39.11 | 35.61 |

**Source:** Indiana Mortality Report, 1999-2002. Indiana State Department of Health

Between 1999 and 2002, the female breast cancer mortality rates in Indiana remained stable (See Fig 26). This may be due to the improvements in treatments and better mammography screening.

Healthy People 2010 goal is to increase the proportion of women aged 40 years and older who have received a mammogram within the preceding 2 years to 70%. In 2002 (according to the BRFSS), mammography in Indiana was about 32.6% lower for women age 35-44 years than for women 45-74 years age (62.7% vs. 92.7% respectively). Of the women age 45 years and over, 17.8% reported not having had a mammogram within the last two years. In Indiana 9.7% of the women over 45 years had never had a clinical breast exam and 16.9% of women age 55 and over had not had a breast exam within the last 2 years.

Racial disparities in screening are major concern. Overall, 30.8% of the African-American women had not had a mammogram for the past two years when compared to only 18% of the white women. This indicates the need to promote mammography screening among African American women.

Ovarian Cancer in Women of Childbearing Age: Ovarian cancer is generally diagnosed too late and therefore known as the deadly disease of female reproductive system. Most common ovarian cancer risk factors are age (more than 50 years), no children (the greater the number of pregnancies, the lower the risk for developing ovarian cancer), past history of breast cancer and race (ovarian cancer occurs 50% more frequently in white women than African-American women). In 2002, ovarian cancer claimed 352 Indiana lives at the age-adjusted death rate of 10.09 per 100,000 standard population. (Nationally the rate was 9 per 100,000 standard population.) The white female ovarian cancer age-adjusted death rate is 10.35 per 100,000 standard population. A very few black females died due to ovarian cancer and therefore their rates were not calculated (rates were unstable).

Cervical Cancer in Women of Childbearing Age: Cervical cancer risk is closely associated with sexual behavior and to sexually transmitted infections with certain types of human papilloma virus. Women who have sex at an early stage, many sexual partners or have partners who have many sexual partners are at higher risk of developing cervical cancer.

In 2000, 283 Indiana women were diagnosed with invasive cervical cancer for an age-adjusted incidence rate of 4.7 per 100,000, which is significantly lower than the national rate of 7.6 per 100,000. From 1996 to 2000, African-American women in Indiana experienced greater incidence of cervical cancer than Caucasian women (13.3 vs. 9.2 cases per 100,000). In Indiana from 1996-2000, 87% of women's cervical cancer was diagnosed early at the in situ or local stage.

In 2002, 79 Indiana women died due to cervical cancer at the age-adjusted death rate of 2.35 per 100,000 standard population. This rate is less than the national cervical cancer age-adjusted death rate (2.6 per 100,000 standard population) by 9%. Healthy People 2010 goal for cervical cancer is 2 deaths per 100,000 females. To reach the Healthy People 2010 goal, the overall cervical cancer age-adjusted death rate in Indiana should decrease by 14.9%.

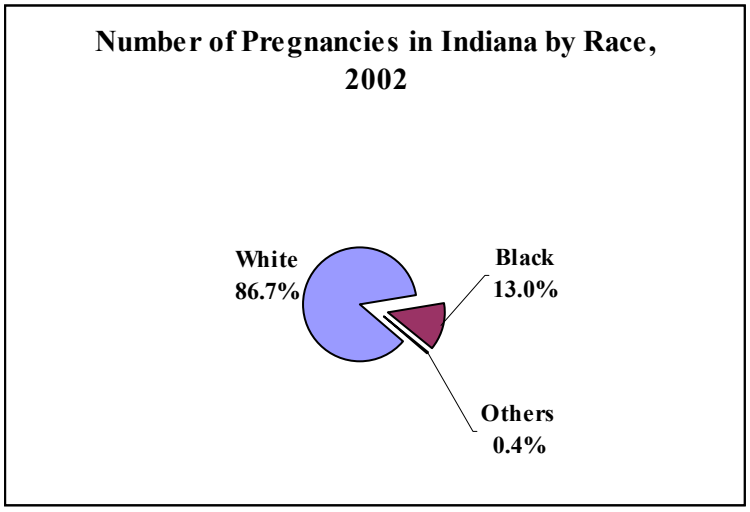
Cervical cancer is highly preventable if pap tests and pelvic exams are done regularly. The Healthy People 2010 goal is to increase the proportion of women aged 18 years and older who have ever received a pap test to 97%. In Indiana's 2002 BRFSS data, 94.7% of the overall women, 96.2% of the white women, 95.3% of the black women and 76.3% of the Hispanic women of ages 18 years and older had ever received a pap smear. To reach the Healthy People 2010 goal, the percentage of overall, white, black and Hispanic women of ages 18 years and older ever receiving pap smear should be increased by 2.3%, 0.8%, 1.7% and 20.7% respectively.

Another related HP 2010 goal is to increase the women aged 18 years and older who received a pap test with the preceding 3 years to 90%. The 2002 BRFSS data indicates that 83.8% of overall women, 83.1% of the white women, 91.1% of the black women and 87.4% of the Hispanic women aged 18 years and older received a pap test with the preceding 3 years. While black women seem to have met the HP 2010 goal from this data, in order for all women, white and Hispanic women to reach the goal, the percentages of overall, white and Hispanic women receiving pap test with the preceding 3 years should be increased by 6.2%, 6.9% and 2.6% respectively.

For the year 2002, the percentage of 18-44 years old Indiana women receiving pap test with the preceding 3 years was 92.3%. This means that according to the BRFSS, the HP 2010 for women of childbearing years, without regard for race and ethnicity (data not available), met the goal in 2002. Also, the BRFSS data indicates the lower annual income (<$15,000) group women were less likely to have a pap test than the higher annual income ($50-$74,999) group (88.8% vs. 97.7%).

***Pregnant Women and Mothers:*** In 2002, there were a total of 93,424 pregnancies for Indiana women of 10-49 years old. Of the 93,424 pregnancies, 80,952 (86.2%) were white, 12,123 (13%) were black and 342 (0.4%) were of other races (See Fig 27). Hispanics, regardless of race, constituted a total of 7.28% of all pregnancies (n=6,808).

**Figure 27**

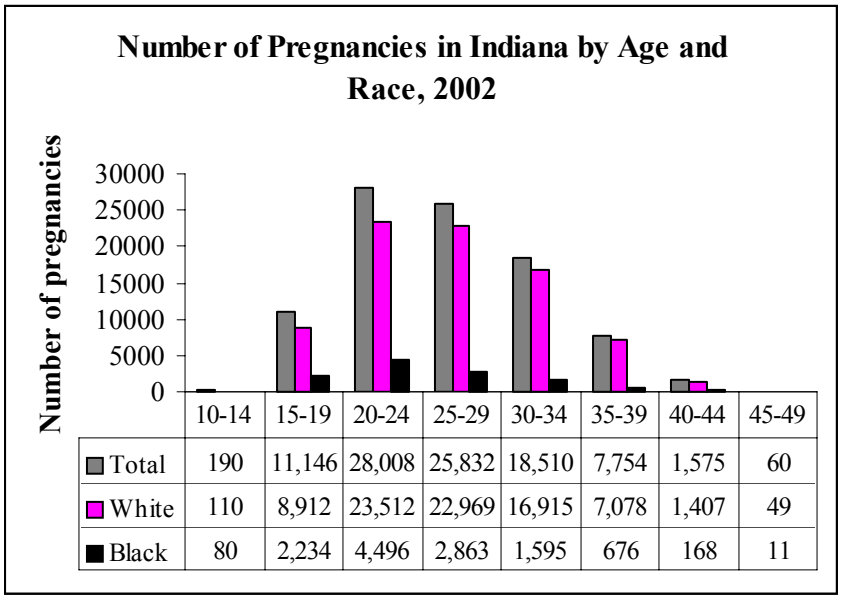



**Source:** 2002 Indiana Natality Report. Indiana State Department of Health.

The counties that had the highest number of black pregnancies in 2002 were Allen (n=902), Lake (n=2,860), Marion (n=5,517), and St. Joseph (n=756).

There is a difference between whites and blacks in regard to the age at which the pregnancies occur. The whites females tend to be pregnant at later ages than black females (See Fig 28).

**Figure 28**

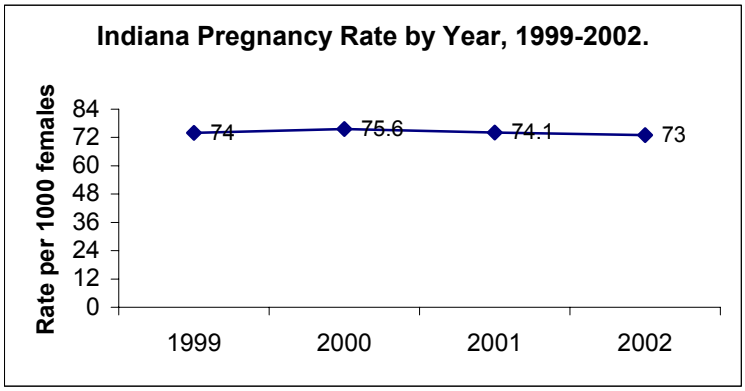



| | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 |
|---|---|---|---|---|---|---|---|---|
| Total | 190 | 11,146 | 28,008 | 25,832 | 18,510 | 7,754 | 1,575 | 60 |
| White | 110 | 8,912 | 23,512 | 22,969 | 16,915 | 7,078 | 1,407 | 49 |
| Black | 80 | 2,234 | 4,496 | 2,863 | 1,595 | 676 | 168 | 11 |

**Source:** 2002 Indiana Natality Report. Indiana State Department of Health.

Pregnancy rates from 1999 through 2002 are shown in Figure 29. Overall, Indiana pregnancy rate slightly decreased by 1.9% (from 74 pregnancies per 1000 women to 73 pregnancies per 1000 women), but, due to an increase in pregnancy rate in 2000, has decreased by 4.3% since the year 2000.

**Figure 29**




**Source:** 2002 Indiana Natality Report. Indiana State Department of Health.
**Note:** Pregnancy rate=Number of Live Births + Fetal Dealths + Abortion in age group X 1000
Number of Females in Population in Age Group

Teenage Pregnancy: Because research has indicated that babies born to teenage mothers and babies born as a result of unintended pregnancies are more likely to die and to have other poor pregnancy outcomes, the Healthy People 2010 goal is to reduce the adolescent pregnancy rate to 43 pregnancies per 1000 population. In Indiana, approximately 13% pregnancies are to teenage women. Between the years 2000 and 2002 there was a steady decline in the Age-specific pregnancy rates for all age groups that include teenage women (see Table 10). Pregnancy rates

also declined in the 20-24 age group. However, the increase of pregnancies in groups between the ages of 25-44 years of age indicates that women in Indiana are delaying pregnancy.

**Table 10 Age-specific Reported Pregnancy Rates, 1999 through 2002: Indiana.**

| Year | Age-specific Pregnancy Rates by Age of Mother | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10-14 | 15-17 | 18-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45+ |
| 1999 | 1.1 | - | - | 144.7 | 134.1 | 85.4 | 32.9 | 5.9 | 0.3 |
| 2000 | 1 | 32 | 96.5 | 141.7 | 138.1 | 90.2 | 34.8 | 6.8 | 0.3 |
| 2001 | 0.9 | 28.7 | 90.4 | 139.9 | 134.3 | 92.5 | 33.7 | 6.8 | 0.3 |
| 2002 | 0.9 | 27.3 | 92.2 | 127.6 | 137.9 | 90.6 | 35.6 | 6.8 | 0.3 |
| **Source**: 1999-2002 Indiana Natality Report. Indiana State Department of Health.<br>**Notes:** Rates for specific age groups are per 1000 females in that age group | | | | | | | | | |

Though Marion and Lake Counties have a slight decreasing trend in teenage pregnancies between 1999 and 2002, they consistently have more than 20 pregnancies for the 10-14 year old group. Of the 92 counties with 20 or more pregnancies to 15-17 year olds, the rates for Clay (48.1), Marion (47.4) and LaPorte (43.3) were above the Healthy People 2010 year goal. The top five counties with higher rates of pregnancies to 18-19 year olds are Marion (148.5), Jackson (144.8), Rush (127.7), Greene (118.4), and Scott (117.9).

Of women under 20 years old who used the Indiana State Department of Health Free Pregnancy Test Program (outreach program to women of childbearing age to get them into health system) in 2002, 82.6% did not want to become pregnant.

Comparison between 1999 and 2002 pregnancy rate for women less than 20 years of age shows a steady decrease from 32.3 to 26.4, while the pregnancy rate for women more than 20 years of age did not change substantially (See Table 11).

**Table 11. Indiana Pregnancy Rates, 1999 through 2002.**

| Year | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| Total Pregnancy Rate | 74 | 75.6 | 74.1 | 73 |
| (i) Females under 20 | 32.3 | 30.3 | 28 | 26.4 |
| (ii) Females over 20 | 63.6 | 65.4 | 64.7 | 63.4 |
| Number of Pregnancies | 97,664 | 100,060 | 98,100 | 95,772 |
| **Source:** Data Request from Epidemiology Resource Center, Indiana State Department of Health. | | | | |

Although there is a decrease in the number of teenage pregnancies, black teenage pregnancy rates continue to be higher than white teenage pregnancy rates. Based on 2002 Indiana vital statistics, black teenagers of ages 15 to 19 years are nearly 2½ times more likely to become pregnant than white teenagers of similar ages (106.1 per 1000 black females versus 47.4 per 1000 white females).

Induced Termination of Pregnancies in Indiana: In 2001, (latest data available) there were 11,873 terminated pregnancies reported in Indiana. Of the 11,873 women who had a pregnancy terminated, 11,369 (95.8%) were Indiana residents. By race, 7,464 (62.9%) of the women with

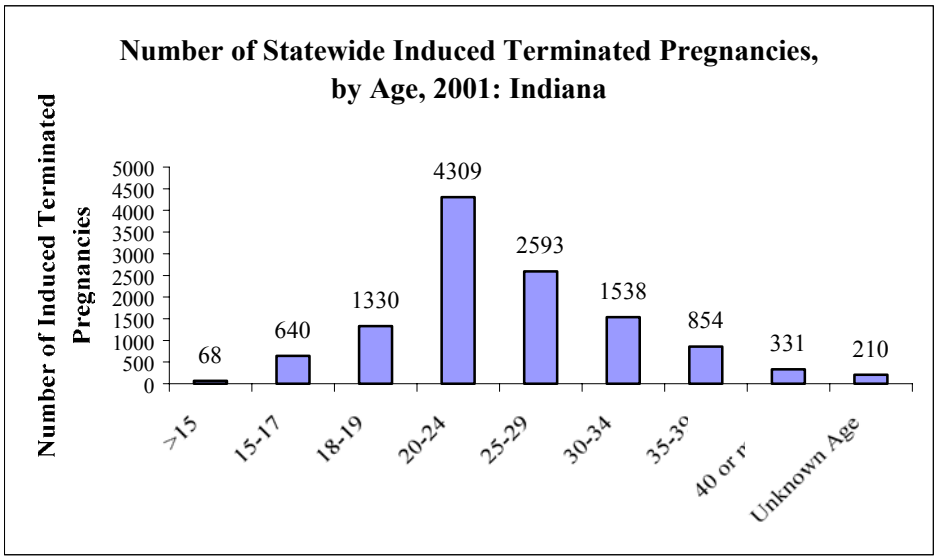
terminated pregnancies were white, 3,249 (27.4%) were black, 268 (2.3%) were of other races, and 892 (7.5%) were of unknown race. 9,549 (80.4%) of the women with terminated pregnancies were non-Hispanic in origin and 654 (5.5%) were of Hispanic origin. Ethnicity was unknown for 1,670 (14.1%) of the women who had a terminated pregnancy.

By marital status, 8,730 (73.5%) of the women who had a pregnancy terminated were not married and 1,670 (14.1%) were married. Marital status was unknown for 1,473 (12.4%) of the women who had a terminated pregnancy. Of the total terminations, 11,281 (95.0%) of them were performed in clinics and 592 (5.0%) were performed in hospitals.

At the time of termination of the pregnancy (Indiana occurrences), less than 1% (n=68) of the women were under the age of 15; 5.4% (n=640) were 15-17 years of age; 11.2% (n=1,330) were 18-19 years of age; 36.3% (n=4,309) were 20-24 years of age; 21.8% (n=2,593) were 25-29 years of age; 13.0% (n=1,538) were 30-34 years of age; 7.2% (n=854) were 35-39 years of age; 2.8% (n=331) were age 40 or more. "Age" was unknown for 1.8% (n=210) (See Figure 30).

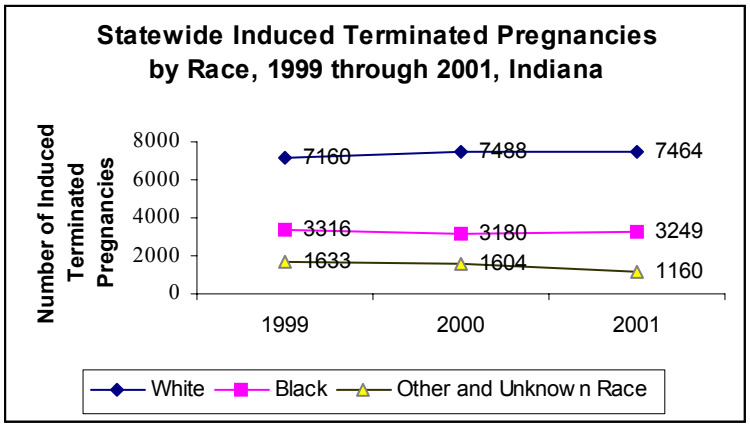
Between 1999 and 2001, the overall number of induced terminated pregnancies decreased by 1.94%. The number of terminated pregnancies in white women increased by 4%; the number of terminated pregnancies in black women decreased by 2%; the number of terminated pregnancies in other races increased by 5%; but the number of terminated pregnancies with an unknown race decreased by 35.3% (See Figure 31), which results in an overall decrease.

**Figure 30**




**Source:** Terminated Pregnancies by age and race, 1999-2001. Indiana State Department of Health.

**Figure 31**




**Source:** Terminated Pregnancies by Race, 1999-2001. Indiana State Department of Health.

Live Births: In 2003 provisional data, the number of Indiana resident births was 86,382, an increase of 893 births, or 1.03% from the number of births in 1999 (see Table 11A). Of the 86,382 live births in 2003, 75,422 (87.3%) were white, 9,288 (10.8%) were black, and 1,672 (1.9%) were classified as other races. Hispanics, regardless of the race, constituted 7.8% (n = 6,763) of all births in 2003 when compared to only 5.1 % (n=4,383) in 1999. The extreme growth in Hispanic population is largely attributable to the increased in birth rates and a raise in level of immigration. Therefore, there is a need to develop and expand linguistically and culturally appropriate services for this population. The following table highlights the number of births by race and ethnicity from 1999 through 2003.

**Table 11 A:**

**Live Births by Race/Ethnicity, Indiana 1999-2003**

| | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Total | 85,489 | 87,697 | 86,122 | 84,839 | 86,382 |
| White | 74,787 | 76,753 | 75,056 | 74,013 | 75,422 |
| Black | 9,244 | 9,421 | 9,531 | 9,243 | 9,288 |
| Hispanic | 4,383 | 5,427 | 5,865 | 6,145 | 6,763 |

**Source:** Epidemiology Resource Center, Indiana State Department of Health.

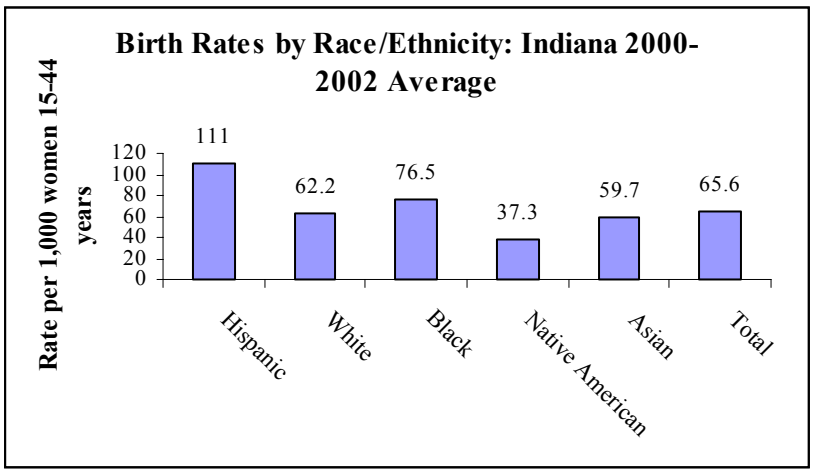
Overall in 2002, 57.5 % of the mothers were between the ages 20-29. The overall percentage of births to women less than 18 years of age was 3.4%; of those 73.3% were white women and 21.8% were black women. In 2002, 64.5% of the mothers were married. By marital status, 36.5% of all the births were to single mothers, 31.9% of the white births were to single mothers and 76.5% of the black births were to single mothers.

Birth Rates: According to the National Vital Statistics Reports, the birth rate in Indiana for 2002 was 13.8 per 1000 population, slightly below the national birth rate of 13.9 per 1000 population. Birth rates in Indiana vary considerably by county. In 2002 the county with highest birth rate per 1000 county-specific population was LaGrange (20.2) and the county with lowest birth rate per 1000 county-specific population was Brown county (9.5). In addition to LaGrange County, the

Adams County (18.4), Hamilton County (16.8), Marion County (16.8) and Elkhart County (16.1) had considerably higher birth rates than the statewide range.

In Indiana, the highest birth rates (per 1000 women ages 15-44) during 2000-2002 (average) were to Hispanic women (111.0), followed by blacks (76.5), whites (62.2), Asians (59.7) and Native Americans (37.3) (See Fig 31 A).

**Figure 31 A**




**Source:** March of Dimes, Indiana
**Notes:** Birth rates presented are calculated using Census 2000-based population estimates.

Fertility Rate: In 2002, the general fertility rate for Indiana was 64.6 births per 1000 females aged 15 through 44 (Table 13). This was slightly below the general fertility rate of United States for the year 2002 (64.8 births per 1000 females aged 15 through 44).

Age-specific birth rates have experienced shifts over the four years (see Table 12). Women in the 25-44 age groups had higher fertility rates in 2002 than in 1999. The fertility rate for women aged 45+ was also slightly higher in 2002 than in 1999. Women younger than 25 had lower fertility rates in 2002 than in 1999 with the greatest decrease occurring in the 20 through 24 age group (a 7% decline).

In Indiana in 2002, the total fertility rate was 2,009, a 1.7 % decrease over the 1999 rate (Table 12). A total fertility rate of 2,110 per 1000 females aged 10 through 49 is estimated to be the minimum needed for population replacement under the current mortality conditions. The minimum population replacement rate assumes no net migration (US Bureau of the Census, 1996). In 2002, the Indiana total fertility rate (TFR) was 2,009 for all races combined. This rate is 4.3% below the theoretical replacement level rate of 2,100.

**Table 12. General Fertility, Total Fertility, and Age-specific Birth Rates by age of Mother, 1999, 2000, 2001 and 2002: Indiana**

| Year | General Fertility Rate (GFR) | Total Fertility Rate (TFR) | Age-specific Birth Rates by Age of Mother | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45+ |
| 1999 | 64.8 | 2,044 | 0.8 | 51.3 | 123.2 | 120.7 | 78.5 | 29.1 | 4.9 | 0.3 |
| 2000 | 66.2 | 2,075 | 0.6 | 49.1 | 121.5 | 124.1 | 82.9 | 30.9 | 5.6 | 0.3 |
| 2001 | 65 | 2,039 | 0.6 | 45.7 | 119.3 | 121.3 | 85.1 | 30 | 5.5 | 0.2 |
| 2002 | 64.6 | 2,009 | 0.6 | 44.5 | 110.5 | 124.9 | 83.4 | 32 | 5.7 | 0.2 |

**Source**: 1999-2002 Indiana Natality Report. Indiana State Department of Health.

**Foot Notes:**

- GFR: General Fertility Rate; birth per 1000 women aged 15-44.
- TFR: Total Fertility Rate; 5 times the sum of Age-specific rates. An estimate of the number of children a group of women would have over their lifetime.
- The rate for age group 45+ is based on the female population aged 45-49.

Fertility rates differ for black and white females. In 2002, the general fertility rate for black females was 15 % higher than for white females. The total fertility rate for black females was 10.3% higher than the white females. Similarly, the total fertility rate for black women exceeded the population replacement rate by 6 %, while the total fertility rate for white females remained below the population replacement rate by 4.23% (Table 13).

**Table 13: General Fertility, Total Fertility, and Age-specific Birth Rates by Age and Race of Mother, Indiana 2002**

| Race | General Fertility Rate (GFR) | Total Fertility Rate (TFR) | Age-specific Birth Rates by Age of Mother | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40-44 | 45+ |
| White | 64.2 | 2,011 | 0.4 | 41 | 107.5 | 128.5 | 86.4 | 32.5 | 5.6 | 0.2 |
| Black | 75.6 | 2,243 | 2.3 | 84.7 | 158.9 | 109.8 | 60.2 | 26.3 | 5.9 | 0.5 |

**Source**: 2002 Indiana Natality Report. Indiana State Department of Health.

**Foot Notes:**

- GFR: General Fertility Rate; birth per 1000 women aged 15-44.
- TFR: Total Fertility Rate; 5 times the sum of Age-specific rates.
- The rate for age group 45+ is based on the female population aged 45-49.

Gender: In Indiana in 2002, as is the usual case, more males were born than females. There were 1,039 males born for every 1000 females. By race, the male-female ratios were: 1.040 for whites, 1.044 for blacks and 0.982 for races other than white or black. However, the rates of infant mortality of males versus females for 2002 were 8.2 and 6.8 respectively; rates were higher for both white and black males when compared to their female counterpart (white= 7.2 versus 6.1; blacks=15.5 versus 12.6).

Method of Delivery: In 2002, 73.4 percent of resident births were vaginal deliveries, 25.1 percent were cesarean sections, 1.4% were VBAC (Vaginal Birth After Cesarean) and 0.1% were unknown. Three of every five cesarean sections (58.2%) were first time cesareans (primary cesareans) and remaining 41.8 percent were repeat cesarean sections.

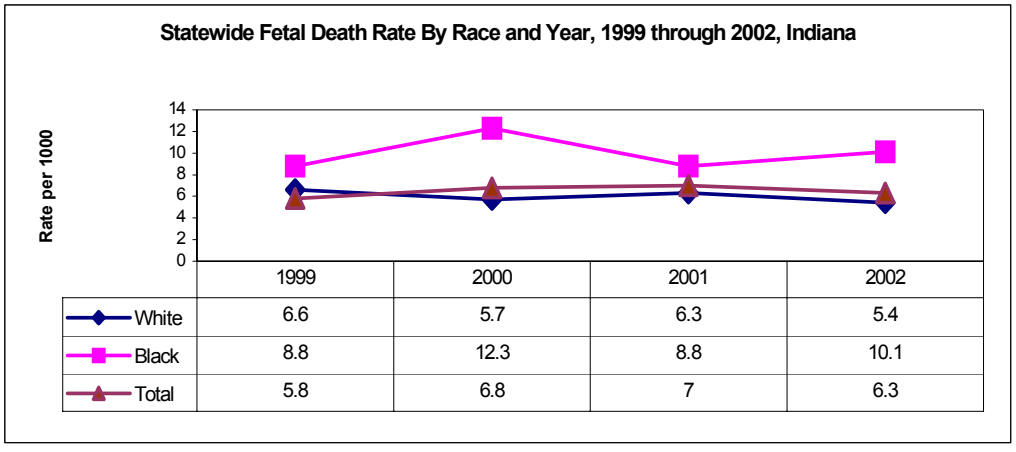
Maternal Mortality: The Healthy People 2010 goal for maternal mortality is no more than 3.3 per 1000 live births. The following table shows the number of maternal deaths and the maternal death rates from the year 1999 through 2002. Again, black maternal death rates are nearly twice that of the white population over this four year span. In 2002 only one maternal death was reported in Indiana, when compared to 7 during 2000 and therefore Indiana met the Healthy People 2010 goal for maternal mortality.

**Table 14** **Maternal Mortality Rates by Race**

| | Live Births | | | Maternal Deaths | | | Maternal Death Rate* | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | White | Black | Total | White | Black | Total | White | Black |
| 1999 | 85,489 | 74,787 | 9,244 | 2 | 2 | 0 | 2.3* | 2.7* | 0.0* |
| 2000 | 87,697 | 76,753 | 9,421 | 7 | 5 | 2 | 8.0* | 6.5* | 21.2* |
| 2001 | 86,122 | 75,056 | 9,531 | 0 | 0 | 0 | 0.0* | 0.0* | 0.0* |
| 2002 | 84,839 | 74,013 | 9,243 | 1 | 1 | 0 | 1.2* | 1.4* | 0.0* |
| 4 yr total | 344,147 | 300,609 | 37,439 | 10 | 8 | 2 | 2.9* | 2.7* | 5.3* |
| * Rate per 100,000 live births. Rates are unstable due to small numbers. | | | | | | | | | |
| **Source:** Indiana State Department of Health, Epidemiology Resource Center, Data Analysis Team | | | | | | | | | |
| **Note:** Maternal Mortality= # of deaths by cause for women during pregnancy + # pregnant-related deaths to new mothers occurring up to 42 days postpartum | | | | | | | | | |

Fetal Deaths: The Healthy People 2010 objective for the overall fetal death rate is 4.1 per 1000 per live births plus the number of fetal deaths. Between 1999 and 2001, the overall fetal death rate in Indiana steadily increased from 5.8 (n=499) to 7.0; however this rate decreased in 2002 to 6.3 (n=535). Similarly, between 1999 and 2001 the white fetal death rate in Indiana steadily increased from 5.1 to 6.3, however, it decreased to 5.4 in 2002. The black fetal death rate fluctuated at the same time period ending with a slight increase to 10.1 in 2002. Hispanic fetal death rate increased steadily from 5.1 in 2000 to 6.6 in 2002. To meet the Healthy People 2010 objectives, the overall fetal death rate must decrease to 4.1 per 1000 live births. Figure 32 shows the fetal death rates by race and year starting from 1999 through 2002.

**Figure 32**




**Source:** 1999-2002: Indiana Mortality Report. Indiana State Department of Health.

In 2002, 74.6 % (n=399) of all fetal deaths occurred in the white population, 17.6 % (n=94) in the black population and 7.7% (n=41) of the fetal deaths in Hispanic population. 12 % of fetal deaths occurred to mothers less than 20 years of age; 28.4% occurred to mothers between 20 and 24 years of age; 43 % occurred between 25 and 34 years of age; 12.7% occurred to mothers between 35 to 44 years of age; and 3.9 % occurred to mothers of 45 years and above.

Trends at County Level (Four Year Fetal Death Rates): Because of the small number (less than 20) of fetal deaths per calendar year in each county, a four-year average was utilized to analyze fetal death rates by county. Moreover, even using the four-year average, only Allen, Lake, Marion, Joseph and Elkhart counties met the minimum of 20 fetal deaths. All five counties have higher fetal death rates (Allen, 7.29; Lake, 7.23; Marion, 7.48; St. Joseph, 7.0; and Elkhart, 7.18) than the State's four-year average rate of 6.46. The Healthy People 2010 objective for the fetal death rate is 4.1 deaths per 1000 live births plus fetal deaths. Of the 5 counties, none met the Healthy People 2010 objective.

The same minimum standard was used when examining the white fetal deaths by county. Again because of the small numbers, the four-year average was utilized and only Allen, Lake, Marion, Elkhart counties met this minimum. All four counties have high white fetal death rates (Allen, 6.14; Lake, 5.35; Marion, 6.15; and Elkhart, 7.03) and only Lake white fetal death rate is less than the State's white fetal death average rate of 5.62. The Healthy People 2010 objective for the white fetal death rate is 4.1 deaths per 1000 live births plus fetal deaths. Of the four counties none of them met the year 2010 objective for the four-year average rate.

Only Lake and Marion counties met minimum standard for calculating the black infant death rate. Both have high black infant death rates (Lake, 10.4; Marion, 9.7). The Lake county black fetal death rate is more than the State's four-year average (9.9). The black fetal death rate Healthy People 2010 objective is 4.1 per 1000 live births. Neither of the two counties met the Healthy People 2010 year objective.

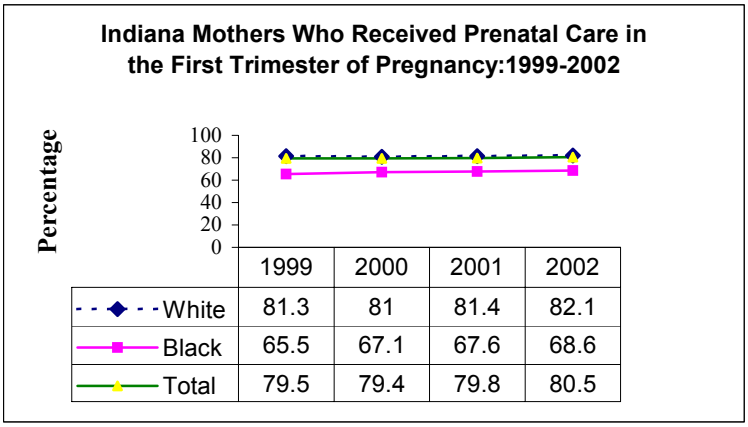
Prenatal Care: Discussion of prenatal care will be focused on the topics of early prenatal care, no prenatal care; and adequacy of prenatal care

- Early Prenatal Care: The objective of prenatal care is to monitor the health of the pregnant mother and fetus. The Healthy People 2010 objective is that 90% of the women receive prenatal care within the first trimester of pregnancy. In Indiana 80.5 % of mothers in 2002 began prenatal care during the first trimester of their pregnancy.

  Between 1999 and 2002, the rate of increase in overall percentage of women who received prenatal care during the first trimester was 1.25%. Similar increases were found in black (4.73%) and white (0.98%) female populations (see Fig 33). In order to reach the Healthy People 2010 objective increases of 11.8%, 9.6% and 31.3 % of the number of women receiving care within the first trimester of pregnancy must occur for the overall, white, and black populations, respectively. For the year 2002, only Crawford, Dearborn, Hancock and Pike counties met the Healthy People 2010 objective for prenatal care. LaGrange County had the lowest percentage of women receiving prenatal care in the first trimester (45.2 %). This county has a large Amish community.

Fewer black mothers (68.6%) received prenatal care in the first trimester than did white mothers (82.1%). In addition, a smaller percentage of young women between ages 10 and 19 (68.32%) received prenatal care in the first trimester than did women 20 and over (82.11%). Young black women are least likely to receive care in the first trimester. Elkhart County had significantly fewer black mothers (51.5%) receiving prenatal care in the first trimester of pregnancy compared to the state.

**Figure 19**

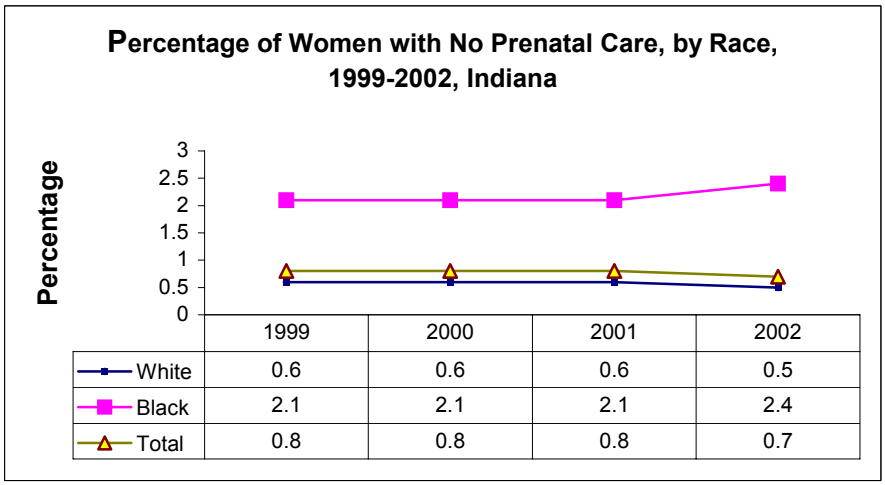



| | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| White | 81.3 | 81 | 81.4 | 82.1 |
| Black | 65.5 | 67.1 | 67.6 | 68.6 |
| Total | 79.5 | 79.4 | 79.8 | 80.5 |

**Source**: Indiana Natality Report, Indiana State Department of Health

- No Prenatal Care: Women who receive delayed (i.e., entry into prenatal care after 12 weeks of pregnancy) or no prenatal care do not receive timely preventive care or education and are at risk for having undetected complications of pregnancy that can result in having low birth weight infants, preterm delivery, and maternal and infant mortality. In 2002, black mothers were 4 times more likely not to receive prenatal care than white woman (See Fig 34). A higher percentage of adolescent mothers received no prenatal care than did women over the age 20.

**Figure 34**




| | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| White | 0.6 | 0.6 | 0.6 | 0.5 |
| Black | 2.1 | 2.1 | 2.1 | 2.4 |
| Total | 0.8 | 0.8 | 0.8 | 0.7 |

**Source:** Epidemiology Resource Center, Indiana State Department of Health.

- Adequate/Adequate Plus Prenatal Care: Adequate/Adequate Plus Prenatal Care is defined as the percentage of women who gave birth to a live born infant, who attended at least 80% of the prenatal care visits, and whose prenatal care began before fifth month of pregnancy.

  The Kotelchuck Index also called the Adequacy of Prenatal Care Utilization (APNCU) Index, incorporates when prenatal care began (initiation) and the number of prenatal visits from when prenatal care began until delivery. Using these two elements, Kotelchuck index characterizes the prenatal care into four categories-Inadequate (received less than 50% of expected visits), Intermediate (50%-79%), Adequate (80%-109%), and Adequate Plus (110% or more).

  The overall number of women in Indiana who received the adequate or adequate plus prenatal care slightly increased from 73.6 % in 1999 to 74.3% in 2002. At the same time the number of women receiving adequate or adequate plus prenatal care slightly increased for both white and black population (See Table 15).

  The year 2002 birth cohort file reveals that white mothers tend to receive adequate plus or adequate care at a higher rate (76.9%) than black females (64.2%). Black mothers were also nearly two times more likely to receive inadequate care than white mothers.

  White mothers at all age categories tend to receive adequate care at a higher rate than the black mothers of similar age.

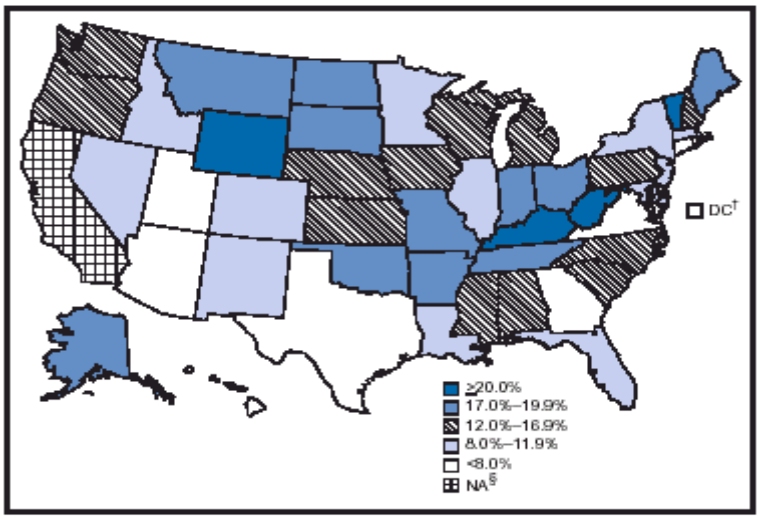
**Table 15: Kotelchuck Adequate/Adequate Plus Care Percent**

| | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Total Kotelchuck Adequate/Adequate Plus Care Percent | 73.6 | 73.3 | 73.1 | 74.3 | N/A |
| White Kotelchuck Adequate/Adequate Plus Care Percent | 76.7 | 75.9 | 75.8 | 76.9 | N/A |
| Black Kotelchuck Adequate/Adequate Plus Care Percent | 63.5 | 63.7 | 63.5 | 64.2 | N/A |
| **Source:** Epidemiology Resource Center, Indiana State Department of Health | | | | | |

Maternal Smoking: Numerous research studies in the United State have found that smoking during pregnancy has many adverse effects to the fetus and resultant newborn. Smokers were 1.3 times more likely to have pre-term babies, 2.1 times more likely to have low birth weight infants, and 2.4 times more likely to have small-for-gestational-age (SGA) infants compared to non-smokers (Smoking During Pregnancy: Indiana 1989-2000, Special Report from Epidemiology Resource Center). In addition, a baby's exposure to second hand smoke has been associated with developing pneumonia and bronchitis, lung disease and sudden infant death syndrome (SIDS). Despite increased knowledge of the adverse health effects of smoking during pregnancy, Indiana has one of the highest maternal smoking rates and is ranked 6th among 50 States for the year 2002. Following is the figure for the percentage of mothers who smoked during pregnancy in the United States (see Figure 21).

**Figure 20**

FIGURE. Percentage of mothers who smoked during pregnancy — United States*, 2002




*Overall U.S. rate was 11.4%.
†District of Columbia.
§Data not available. California does not report maternal smoking.

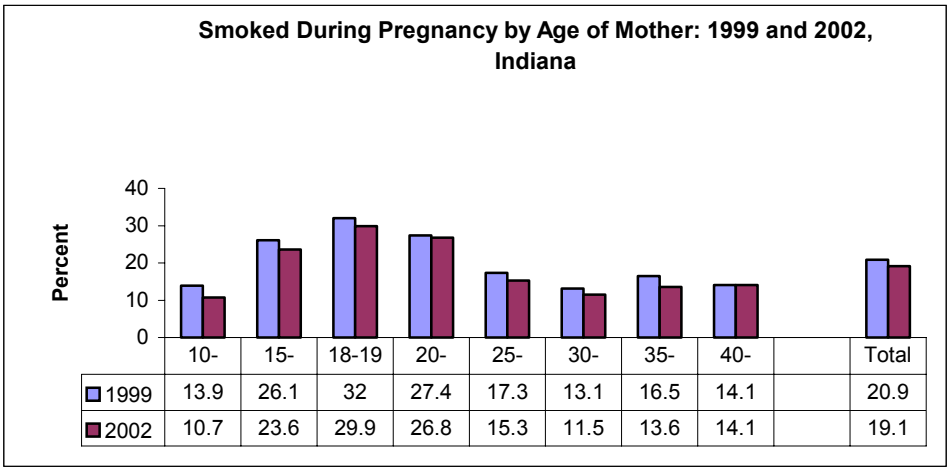
**Source**: Smoking During Pregnancy-United States, 1990-2002, MMWR, Centers for Disease Control.

The overall U.S. rate for the mothers who smoke during pregnancy in 2002 was 11.4%. In Indiana the rate was 19.1%. The rate was higher among whites at 19.9%, and lower among blacks at 15.2%. At the county level, pregnancy smoking rates ranged from 6.7% (least) in Hamilton County to 36.8% (highest) in Scott County. Therefore, Indiana is unlikely to reach the Healthy People 2010 goal of reducing the smoking among pregnant women to no more than 1%.

But interestingly, between the years 1998 and 2002 there was a steady decline in the percentage of women of all ages smoking during their pregnancy (See figure 36). Indiana mothers ages 10-14 years old smoked during their pregnancy decreased from 13.9% to 10.7%; 15-17 years old from 26.1% to 23.6%; 18-19 years old from 32% to 29.9%; 20-24 years old from 27.4% to 26.8; 25 to 29 years old from17.3% to 15.3%; 30-34 years old from 13.1% to 11.4%; 35-39 years old from 16.5% to 13.7% and 40-44 years old from 14.6% to 14.3%.

Widespread public health messages by Indiana State Department of Health to abstain from smoking during pregnancy and smoking-cessation programs have helped decrease maternal smoking. Although there are tangible efforts, additional interventions are required to reach the Healthy People 2010 goal of reducing maternal smoking to no more than 1%.

**Figure 36**




| | 10- | 15- | 18-19 | 20- | 25- | 30- | 35- | 40- | | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 1999 | 13.9 | 26.1 | 32 | 27.4 | 17.3 | 13.1 | 16.5 | 14.1 | | 20.9 |
| 2002 | 10.7 | 23.6 | 29.9 | 26.8 | 15.3 | 11.5 | 13.6 | 14.1 | | 19.1 |

**Source**: Table 20: 2002 Indiana Mortality Report. Indiana State Department of Health

Alcohol Use During Pregnancy: Healthy People 2010 goal is to increase the pregnant women abstaining from alcohol in past month to 94% and to increase the pregnant women abstaining from binge drinking in the past month to 100%. In 2002, 0.7% of Indiana mothers had consumed alcohol beverages during their pregnancy. The rate was higher among blacks at 1.5% and lower among whites at 0.7%. Between 1999 and 2002 there was a slight decrease in the overall pregnant women consuming alcohol beverages by 0.1%.

Pregnant Women Weight and Infant Weight (Obesity): There is a strong relationship between the weight of a pregnant woman and infant weight. Studies suggest that underweight pregnant women are more likely to have a preterm delivery of a low birth weight baby. Conversely, overweight pregnant women are at risk of pregnancy induced hypertension and gestational diabetes and to have high birth weight babies. According to the CDC Pregnancy Nutrition Surveillance System of pregnant women participating in the 2001 WIC program, only 42.8% of the Indiana women were normal weight before pregnancy. In that year, 13.4 % were overweight and 29.2% were very overweight; 9.7 % were underweight and 4.9% were very underweight. During pregnancy, 45.8% of the Indiana pregnant women participating in the 2001 WIC program had ideal weight gain, 19.2% gained less weight than recommended and remaining 35% gained more weight than recommended. Infants born to the mothers of less than the ideal weight gain experienced the low birth weight rate of 12 % compared to the 6.2 % among those born to women of ideal weight gain.

Perinatal Transmission of HIV/AIDS: HP 2010 goal is to reduce the new cases of perinatally acquired Human Immuno-Deficiency Virus (HIV) infection. Since July 2003, Indiana has been an "opt out" state for HIV testing. HIV testing must now be a part of the routine prenatal testing of pregnant women unless they decline in writing to the testing. From 1982 to December 2003, 38 mothers were HIV positive and 43 had been diagnosed with AIDS (Acquired Immuno-Deficiency Syndrome). These mothers had a total of 454 children that were born—the majority after the mother tested positive for HIV. These numbers include all children, including those that were born before medication to prevent the spread of HIV virus from mother to child. Of these 454 children, 154 (35%) were white, 233 (51%) were black, 13 (3%) were Hispanic and 52

(11%) were multiracial. Of all the children that were born to infected mothers, HIV status of 72 (15.8%) is still undetermined, 46 (10%) were infected with HIV, 51 (11.2%) have AIDS, and 285 (62.7%) are definitely not infected (see Table 16). Black children are nearly one and a half times more likely to have HIV or AIDS than white children.

The number of children born in 2003 to HIV+ women in Indiana was 34. Of those 34, 29 are known to have sero-reverted and 5 are presently lost to follow-up and remain counted as "pediatric exposures". There were 142 women diagnosed with HIV in 2003 in Indiana; nine were Hispanic (all races), 81 were black (non-Hispanic) and 52 were white (non-Hispanic).

The number of pregnant women that will have an HIV test done will likely be higher in coming years, since the Indiana State legislature passed a law that makes HIV testing mandatory for pregnant women (unless a women chooses not to be tested) beginning July 2003.

**Table 16: Cumulative Children Born to HIV Infected Mothers, December 2003**

| Cumulative Children Born to HIV Infected Mothers, December 2003 | | | | | | |
|---|---|---|---|---|---|---|
| **Race** | **Exposed** | **HIV** | **AIDS** | **Definitely Not Infected** | **Total** | **Percent Total** |
| White | 16 | 16 | 19 | 103 | 154 | 34% |
| Black | 45 | 26 | 28 | 134 | 233 | 51% |
| Hispanic | 5 | 0 | 0 | 8 | 13 | 3% |
| Multiracial | 6 | 4 | 3 | 39 | 52 | 11% |
| Other | 0 | 0 | 1 | 1 | 2 | 1% |
| Total | 72 | 46 | 51 | 285 | 454 | 100% |
| **Source:** HIV/STD Quarterly Reports, Indiana State Department of Health | | | | | | |

***Infants***: Since infant mortality ( including neonatal, post-neonatal) reflects the general health of the population, a review of these data and risk factor data will be the primary focus of this discussion.

Of the total deaths occurred to babies born in Indiana in 2002, 441 (68%) died within 28 days of life. Between 1999 and 2002, overall neonatal death numbers remained the same, while the white neonatal death numbers decreased by 1.8% and the black neonatal death numbers decreased by 8 % and the Hispanic neonatal death numbers increased by 58.3%.

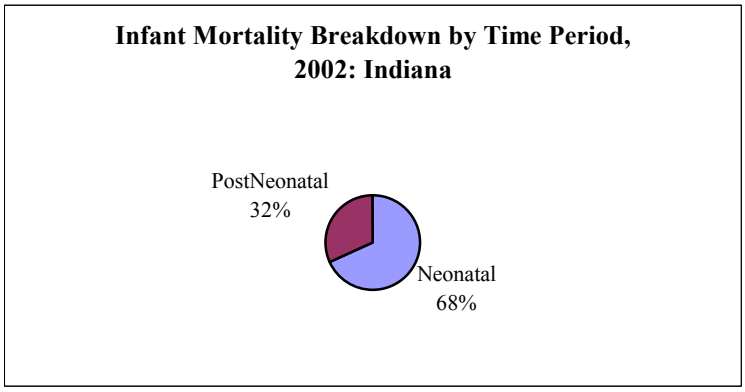
The Healthy People 2010 goal for neonatal mortality rate is 2.9 per 1000 live births. In Indiana, the overall neonatal mortality rate for the year 2002 was 5.2 deaths per 1000 live births, the white neonatal mortality rate was 4.4 per 1000 live births, black neonatal mortality rate was 9.8 per 1000 live births and the Hispanic neonatal mortality rate was 6.2 per 1000 live births.To meet the Healthy People 2010 goal of 2.9 deaths per 1000 live births, an additional decrease of 44%, 34%, 70% and 53% is necessary for the overall, white, black and Hispanic neonatal mortality rates respectively.

Of all infant deaths in Indiana in 2002, 208 infants (32%) died between 29 and 365 days of life (see Figure 37). The overall post-neonatal mortality for the year 2002 was 2.5 deaths per 1000 live births. The white post-neonatal mortality rate was 2 deaths per 1000 live births and black post-neonatal mortality rate was 5.7 deaths per 1000 live births. Black infant are 2.85 times more likely to die in the post-neonatal period than are whites.

Healthy People 2010 goal for post neonatal mortality rate is 1.2 per 1000 live births. Between 1999 and 2002 in Indiana, the overall post neonatal mortality rate slightly decreased from 2.7 deaths per 1000 live births to 2.5 deaths per 1000 live births, a 2.2% improvement. However, an additional decline of 51.4% is needed to achieve the Healthy People 2010 goal. The white and black post-neonatal mortality rate decreased by 12.3% and 8.6% respectively over the same period, but must decline an additional of 40.8% and 79% respectively to meet the Healthy People 2010 goal.

The overall Healthy People 2010 goal for infant mortality is 4.5 per 1000 live births. In 2002, 649 infants in Indiana died before their first birthday. Indiana's infant mortality rate (7.6 deaths per 1000 live births) was higher when compared the national infant mortality rate (7 deaths per 1000 live births). Between 1999 and 2002, the Indiana's infant mortality rate fell from 7.8 to 7.6, a 2.56% improvement. Additional 40.7% improvement is needed to reach the Healthy People goal of 4.5.

**Figure 37**

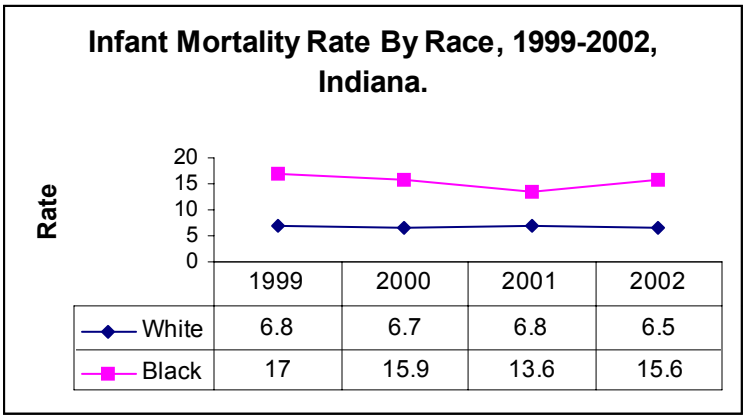



**Source**: 2002 Indiana Mortality Report. Indiana State Department of Health.

White infant mortality rate was 6.5 per 1000 live births (479 of 649 or 73.80% of infant deaths)[See Fig 38]. Between 1999 and 2002, white infant mortality rate decreased by 4.4%. Additional 30.76% improvement is needed to reach the Healthy People 2010 goal of 4.5.

Similarly, black infant mortality rate is 15.6 deaths per 1000 live births (144 of 649 or 22.2% of infant deaths) [See Fig 38]. Between 1999 and 2002, the black infant mortality rate fell from 17 to 15.6, an 8.23% improvement. Additional 71.1% improvement is needed to reach the Healthy People 2010 goal of 4.5.

**Figure 38**




**Source**: 1999-2002 Infant Mortality Report. Indiana State Department of Health.
Notes: Rate=Infant Mortality Rate per 1000 live births.

:

A significant disparity is being observed between white and black infant mortality rates. Infants born to black women are 2.4 times more likely to die in the first year than the white infants in 2002. Interestingly, between 1999 and 2002, more improvement was observed in the black infant mortality rates than in the white infant mortality rates. MCSHC has worked to improve these rates. Even with this improvement, the disparity of infant death among blacks is a cause of concern. Improvement of the black pregnancy outcomes will be a key factor in making significant impact on State's infant mortality rates.

Trends at the County Level (Four-Year Infant Mortality Rate): Because of the small number (less than 20) of deaths occurring in each of the counties per calendar year, four-year data was combined. However even after combining four-year data only Allen, Hamilton, Lake, Marion, and St. Joseph counties met the minimum of 20 deaths. Four of these five counties have fairly high infant death rates (Allen, 6.57; Hamilton, 6.36; Lake, 9.5; Marion, 9.34; and St. Joseph, 7.83). Only Allen and Hamilton counties infant death rate is less than the State's four-year average rate of 7.69. The Healthy People 2010 objective for the infant death rate is 4.5 deaths per 1000 live births plus fetal deaths. Of the 5 counties, not one county met the Healthy People 2010 objective for the four-year rate.

The same minimum standard was used when examining the white infant deaths by county. Again because of the small numbers four-year data was combined and only Allen, Lake and Marion counties met the minimum of 20 deaths. All of the three counties have fairly high white infant death rates (Allen, 5.25; Lake, 6.84; and Marion, 6.95) and only Allen County infant death rate is less than the State's white infant death average rate of 6.68. Of the three counties none them met the Healthy People 2010 objective for the four-year average rate.

Only Lake and Marion counties met minimum standard for calculating the black infant death rate. Both of the counties have high black infant death rates (Lake, 15.3; Marion, 15.4), but they are less than the State's four-year average rate of 15.5. Of the two counties neither of them met the Healthy People 2010 objective for the four-year average rate. [Preliminary data for 2003 indicates that in Lake County the overall infant mortality rate dropped from 10.6 in 2002 to 7.9; white infant mortality dropped from 8.1 to 6.6; and the black infant mortality dropped from 15.7

to 10.9. When the data is certified, they should also affect the four year average for this county. Much effort has been focused on Lake County through Healthy Start, MCH, and other concerned groups to affect this change. It is hoped that this is a permanent drop in infant mortality rates for this county.]

Leading Causes of Infant Death: The three leading causes of infant death among all races and among whites in the year 2002 were: disorders related to short gestation and low birth weight, congenital anomalies and Sudden Infant Death Syndrome (Table 17). All together, these leading causes accounted for 42.2% of infant deaths. Among blacks, the leading causes of deaths were disorders related to short gestation and low birth weight followed by congenital anomalies and accidents. Additional causes of infant deaths include newborn affected by maternal complication of pregnancy, respiratory distress of newborn, infections and external causes. External causes primarily include accidents. Post neonatal death reflects events experienced in infancy, including SIDS, birth defects, injuries, and homicide.

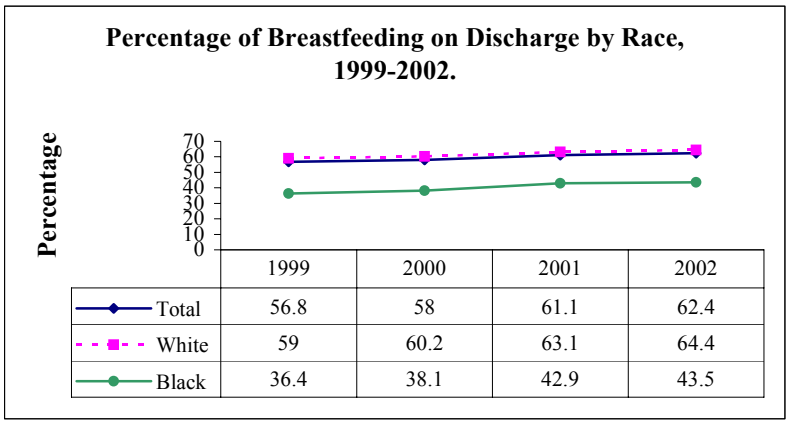
**Table 17: Leading Causes of Infant Death by Reported Race**
**Indiana Mortality Report-2002**

| Total Infant Population | Number | Age-Specific Rate | White Infant Population | Number | Age-Specific Rate | Black Infant Population | Number | Age-Specific Rate |
|---|---|---|---|---|---|---|---|---|
| Short Gestation & Low Birth Weight | 119 | 139.82 | Congenital Malformations | 94 | 129.14 | Short Gestation and Low Birth Weight | 29 | 323.48 |
| Congenital Malforma-tions | 115 | 135.12 | Short Gestation and Low Birth Weight | 83 | 114.03 | Congenital Malformations | 16 | ** |
| Sudden Infant Death Syndrome | 40 | 47 | Sudden Infant Death Syndrome | 33 | 45.34 | Accidents | 14 | ** |
| **Source: 2002** Indiana Mortality Report. Indiana State Department of Health | | | | | | | | |

Factors related to Infant Health: Many factors, which occur prior to pregnancy, during pregnancy and during the life span of the infant, impact positively or negatively the health of the infant. The following will provide data around those factors.

- Breastfeeding Rate At Hospital Discharge: Between 1999 and 2002, percentage of breastfeeding at discharge steadily increased for both the white and black races. The Healthy People 2010 objective is to increase the percentage of mothers who breastfeed their babies in the early period following their birth (postpartum) to 75 percent. In 2002, 62.4 % (52,936) of infants were breastfed at hospital discharge. The racial disparities remain high with black women breastfeeding at very low rates. Only 43.5% (4,018) of black infants were breastfed when compared to white infants of 64.4% (47,684) [see Fig. 39]. To meet the Healthy People 2010 goal objective, the overall infants who were breastfed must increase by 20.1%, the white infants who were breastfed must increase by 16.4%, and the black infants who were breastfed must increase by 72%.

**Figure 39**

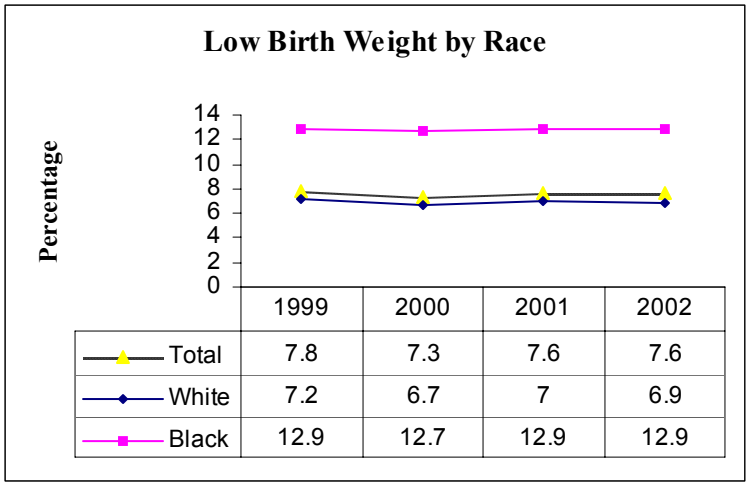



**Source:** Indiana Natality Report, 1999-2002. Indiana State Department of Health

- Low Birth Weight: Low birth weight (a weight of less than 5 pounds, 8 ounces [2500 grams] at birth) is the leading cause of infant death in Indiana. The Healthy People 2010 goal is to reduce the low birth weight babies to 5% of the live births.

  Over the last four years, the overall low birth weight percentage decreased from 7.8 to 7.6 and the white low birth weight percentage decreased from 7.2 to 6.9. However, the black low birth weight percentage remained the same at 12.9 during this period (See Figure 40). Black infants are approximately two times more likely to be born at low or very low birth weights than the overall population. Although black infant births comprise 10.9% of the total births in Indiana in 2002, they represent 18.5% of the overall low birth weight infants. To meet the Healthy People 2010 goal, the overall number of low birth weights must decrease by 34.2%, the number of white low birth weights must decrease by 27.8% and the number of black low births weights must decrease by 61.4%.

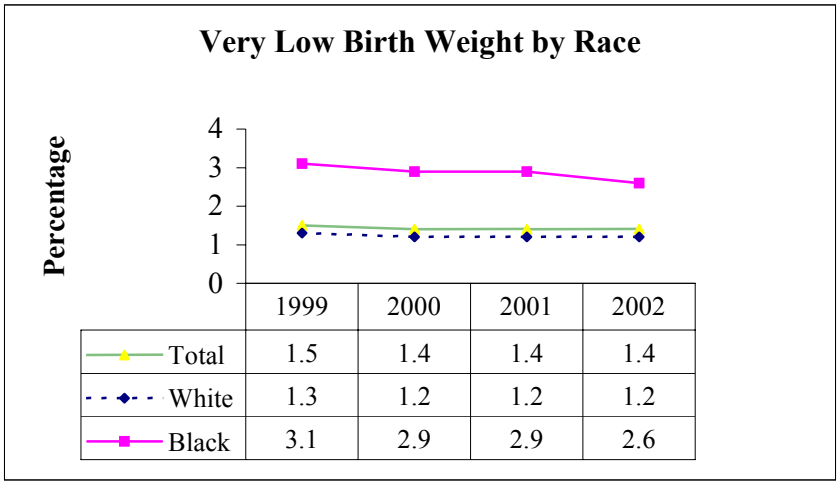
**Figure 40**




**Source:** Indiana Natality Report, Indiana State Department of Health

- Very Low Birth Weight: In 2002, the overall very low birth weight percentage (less than 3 pounds, 5 ounces [1,500 grams]) in Indiana was 1.4% of the total live births. Black infants (2.6%) are two times more likely to be born with very low birth weight than white infants (1.2%). Between 1999 and 2002 the overall very low birth weight percentage in Indiana decreased by 6.3% (from 1.5% in 1999 to 1.4% in 2002), the white very low birth weight percentage decreased by 4.4% (from 1.3% in 1999 to 1.2% in 2002) and the black very low birth weight percentage decreased by 14.1% (from 3.1% in 1999 to 2.6% in 2002) [See Fig 41]. The Healthy People 2010 goal for very low birth weight is 0.9 percent of live births. To meet the Healthy People 2010 objective, the overall number of very low birth weight must decrease by 35.2%, the number of white very low birth weight infants must decrease by 27.1% and the number of black very low birth weight infants must decrease by 65.8%.

**Figure 41**




| | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| Total | 1.5 | 1.4 | 1.4 | 1.4 |
| White | 1.3 | 1.2 | 1.2 | 1.2 |
| Black | 3.1 | 2.9 | 2.9 | 2.6 |

**Source:** Indiana Natality Report, Indiana State Department of Health

## B. Children and Adolescents:

Childhood Mortality: For Healthy People 2010, the goals are (1) to reduce the mortality rate for children, ages 1-4 to no more than 18.6 per 100,000, (2) to reduce the mortality rate for children ages 5-9 years to no more than 12.3 per 100,000 and, (3) to reduce the mortality rate in adolescents, ages 10-14 years to no more than 16.8 per 100,000. In Indiana in 2002 the mortality rate for children age 1-4 was 34.9 per 100,000; for children 5-9, 17.1 per 100,000; and for children 10-14, 18.2 per 100,000. All age groups were above the HP 2010 goals.

Unintentional injury (accidents) had the only measurable rate for child deaths of age 1-14 years in Indiana in 2003. The rate for ages 1-4 was 12.42 per 100,000. For children ages 5-14 the rate was 4.42 per 100,000. Rates for the remaining causes of death among children ages 1-14 were unstable due to small numbers.

Although the rates are unstable, the other leading causes of death among children ages 1-4 were congenital anomalies, assaults, malignant neoplasms, and diseases of the heart. Among children

ages 5-14, the other leading causes of death were malignant neoplasms, diseases of the heart, congenital anomalies, and homicide.

Child Morbidity: The Healthy People 2010 objectives for vaccine-preventable disease is to completely eliminate cases of measles, mumps, polio, rubella, tetanus, and to reduce pertussis in children, 7 years of age and younger, to 2000 cases nationwide. For the past few years, Indiana immunization rates have increased significantly, reducing preventable infectious diseases such as measles, mumps and pertussis to an all time low, and completely eliminating rubella. The last rubella case was confirmed was in 1993.

Immunization reports by the Indiana State Department of Health show that only 79.3% of two-year old children seen by private providers and 79% of two-year old children seen by public providers in 2002 (both local health departments and other public providers) received 4:3:1:3 vaccination series (4 DTaP, 3 Polio, 1 MMR, and 3 Hib vaccines) by 24 months of age. According to the US National immunization survey, the percentage of the 4:3:1:3 vaccination series by 24 months of age for the State of Indiana during 3rd quarter of 2002 and 2nd quarter of 2003 was 78.6% (See Table 18). In Marion County, the rate was 73.8%.

Between 1999 and 2003, immunization rates remained stable without any major fluctuations. Though the Indiana immunization rates are better than the national rates, the state remained far from the Healthy People 2010 goal of vaccinating 90% of all two year olds to ensure children throughout Indiana are protected against vaccine preventable diseases.

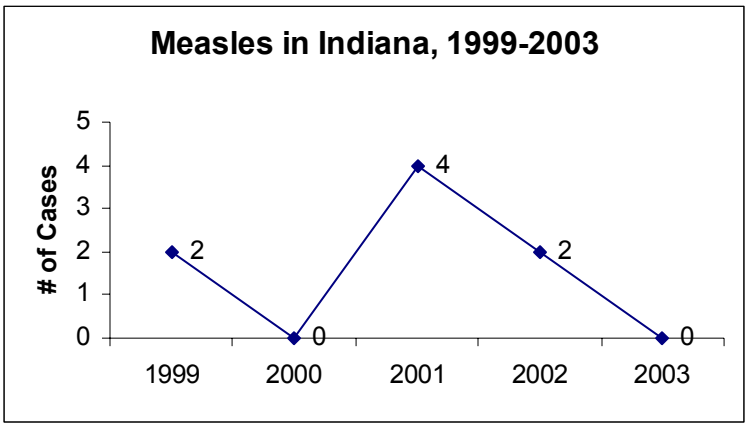
**Table 18: Summary of Individual Antigen and Vaccination Series Completion Levels, by 24 months of Age, 3rd Quarter/2002-2nd Quarter/2003, Indiana.**

| Individual Antigens | Total % Complete | |
|---|---|---|
| | Indiana | US National |
| 3 DTaP (Diphtheria, Tetanus, Pertussis) | 95.4 | 95.6 |
| 4 DTaP (Diphtheria, Tetanus, Pertussis) | 83.7 | 80.2 |
| 3 Polio (Oral and Inactivated) | 91.5 | 89.5 |
| 1 MMR (Measles, Mumps, and Rubella) | 90.9 | 91.4 |
| 3 Haemophilus influenzae type b (Hib) | 93.6 | 93.1 |
| 3 HepB (Hepatitis B) | 92.0 | 90.0 |
| **Vaccination Series** | | |
| 4 DTaP: 3 Polio: 1 MMR | 80.1 | 77.1 |
| 4 DTaP: 3 Polio: 1 MMR: 3 Hib | 78.6 | 76.3 |
| 4 DTaP: 3 Polio: 1 MMR: 3 Hib: 3 HepB | 74.7 | 73.9 |
| Source: US National Immunization survey | | |

- Measles: There were no cases of measles in Indiana in 2003. Measles is no longer believed an indigenous disease in the United States. From 1999-2003, only 8 cases have been reported in Indiana (See Fig 42). All these cases are directly linked to foreign exposure. Maintaining a thorough measles surveillance program, including complete investigation of each suspected case, is essential in determining the level of measles incidence in the United States. (Unfortunately, in 2005 there has been a measles outbreak

in Tippecanoe County caused by an individual who contracted the disease while overseas.)

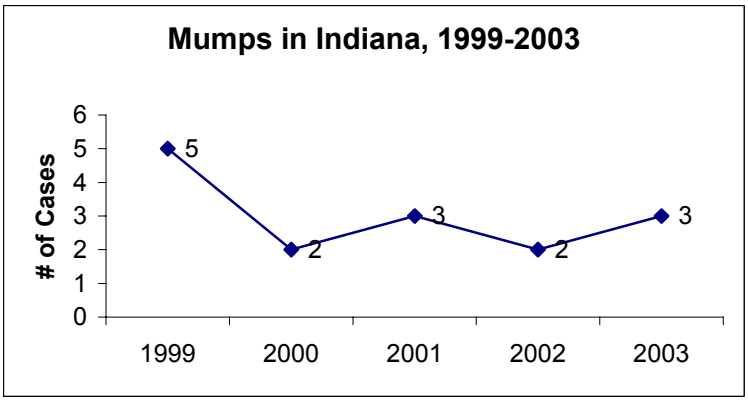
**Figure 42**




**Source**: Indiana Report of Infectious Diseases, Indiana State Department of Health

- Mumps: In 2003, only 3 cases of mumps were reported in Indiana when compared to 5 cases in 1999. Between 1999 and 2003, only 15 cases of mumps have been reported in Indiana (See Fig 43). Progress is evident, however Indiana immunization coverage must be improved to completely reduce the incidence to zero and to eliminate future epidemic years.

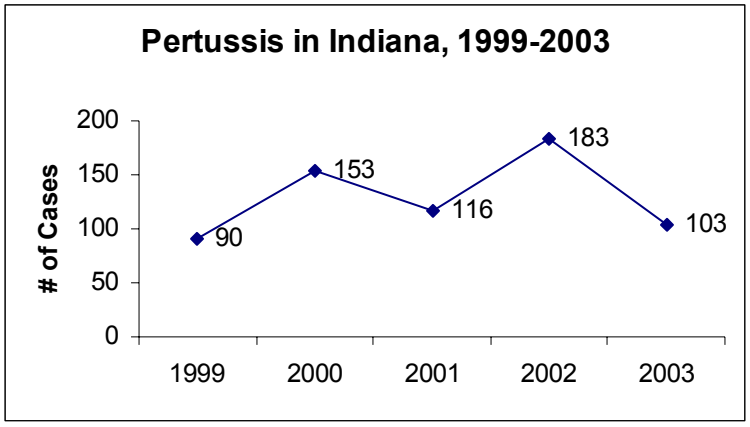
**Figure 43**




**Source**: Indiana Report of Infectious Diseases, Indiana State Department of Health

- Pertussis: Unlike other vaccine-preventable diseases, pertussis incidence has increased over the past 15 years. A mean of 86 cases per year was found for 1987-1991; a mean of 108 cases per year was found between 1992 and 1997; and a mean of 129 cases per year was found between 1999 and 2003 (See Fig. 44). This upward trend is the same at the national level. This long-term increase is attributable to better recognition and reporting of suspected cases, according to the Indiana State Department of Health. Unvaccinated children are at highest risk for severe disease, but fully immunized children may also develop the disease.

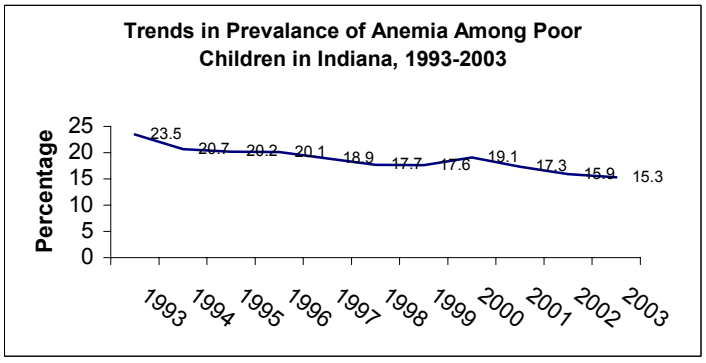
**Figure 44**




**Source**: Indiana Report of Infectious Diseases, Indiana State Department of Health

Anemia among Children: Healthy People 2010 goal is to reduce the prevalence of anemia to 5% among 1 to 2 years old children and to 1% among 3 to 4 year old children. Over the last five years, the incidence of anemia among children of lower income families who participate in Supplemental Nutrition Program for Women, Infants, and Children (WIC) ( Indiana Pediatric Nutrition Surveillance System is collected through WIC) has fallen from 17.6% in 1999 to 15.3% in 2003 (See Fig 45), an improvement but still short of the goal set in the Healthy People 2010 objectives. However, in looking at the longer period, there is a steady decrease in the incidence of anemia in poor children. For example, during 1993 the prevalence of anemia in poor children was 20.1%, which was highest over the 10-year trend. Although all races are far above the Healthy People 2010 goals for incidence of anemia, African American anemia rates are significantly worse than any other racial or ethnic group (See Fig 46).

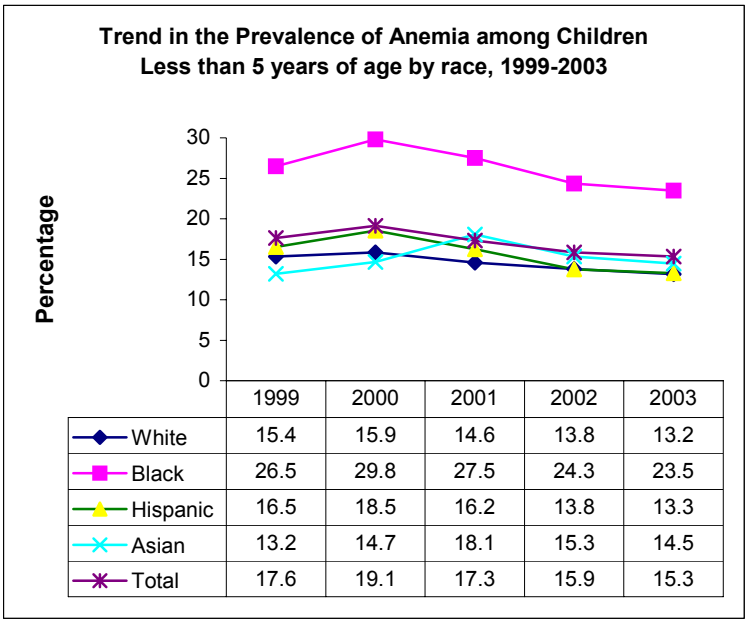
**Figure 45**




**Source:** Pediatric Nutrition Surveillance System, Centers for Disease Control

.

**Figure 46**



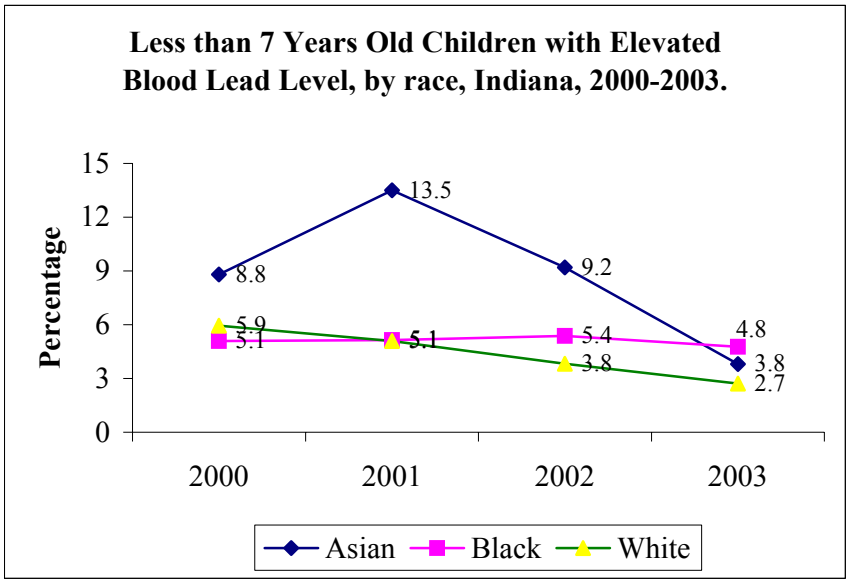

| | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| White | 15.4 | 15.9 | 14.6 | 13.8 | 13.2 |
| Black | 26.5 | 29.8 | 27.5 | 24.3 | 23.5 |
| Hispanic | 16.5 | 18.5 | 16.2 | 13.8 | 13.3 |
| Asian | 13.2 | 14.7 | 18.1 | 15.3 | 14.5 |
| Total | 17.6 | 19.1 | 17.3 | 15.9 | 15.3 |

**Source:** Pediatric Nutrition Surveillance System, Centers for Disease Control

Childhood Lead Poisoning: The Healthy People 2010 objective is to reduce the incidence of elevated blood lead levels (10 or more ug/dL) to zero for children under 5 years of age. Indiana's Childhood Lead Poisoning Program has screened more than 111,945 children ages 0-6 for blood levels since 1999. In 2003, the program screened 31,413 children and identified 924 (2.9%) children with elevated blood levels. Between 1999 and 2003, the counties that consistently had more children with elevated blood lead levels were Allen, Clinton, Elkhart, Lake, Marion, St Joseph and Wayne. All these counties, except Elkhart, had a higher percentage of children under poverty than Indiana State average of 14.4%. Also, St. Joseph, Lake, Clinton, and Wayne were found to have higher percentage of pre-1950 housing than the Indiana State average of 28.3%.

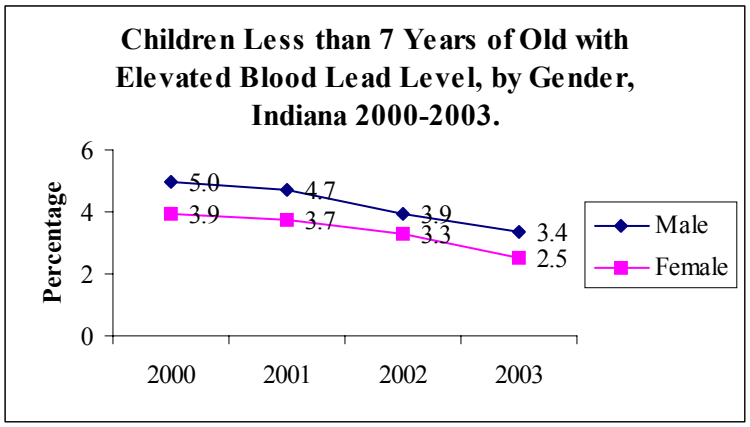
Overall, Asian and Hispanic children less than 7 years of age experienced higher lead levels in their blood when compared to other races of the same age group. But the trend seems to be decreasing. Between 2000 and 2003, the percentage of Asian children, with elevated blood lead levels (EBL) decreased from 8.8 to 3.8, and the percentage of Hispanic children with EBL levels decreased from 8 to 4.5 (See Fig 47). In 2003, 3.5% of the males and only 2.5% of the females under 7 years old screened for lead poisoning were found to have elevated lead levels in their blood (See Figure 48).

**Figure 47**




**Source:** The Lead Poisoning Prevention, Indiana State Department of Health

**Figure 48**




**Source:** The Indiana Childhood Lead Poisoning Prevention Program, ISDH.
**Note:** The information is based on the reports of blood lead tests received by Indiana Childhood Lead Poisoning Prevention Program (ICLPPP). Since no reporting requirements were in place for the tests with elevated blood lead levels (EBLL, blood lead ≥ 10 µg/dL) until late 2000, and not all blood lead tests were required to report to ICLPPP until July 1, 2003, data and results presented here might be incomplete.

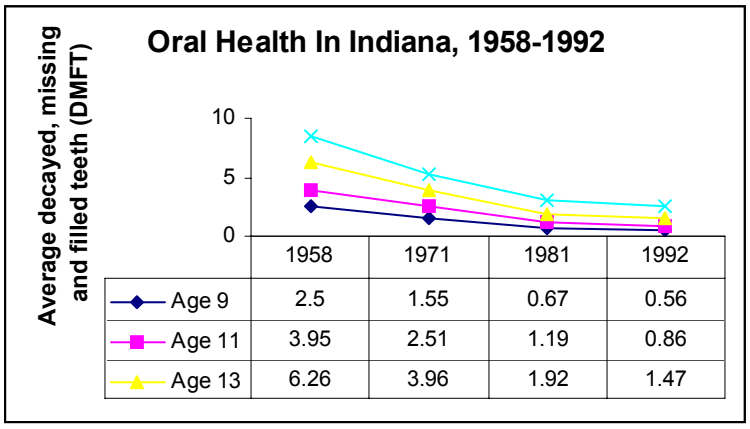
Oral Health: The goals for Healthy People 2010 contain several objectives relevant to the oral health of Indiana children, including: (1) reducing the untreated dental caries so that the proportion of children with one or more dental caries in primary or permanent teeth is no more than 42% in children aged 6 to 8 years and to no more than 51% among adolescents of ages 15 years; (2) reducing the untreated dental decay so that the proportion of children carrying dental caries is no more than 21% among children aged 6 to 8 and no more than 15% among

adolescents aged 15; and (3) increasing to at least 50% the proportion of children who have received protective sealants on the chewing or occlusal surfaces of permanent molar teeth.

Since 1958, Indiana State Department of Health has conducted four statewide clincal surveys to assess school children's oral health status for decayed, missing, and filled teeth (DMFT). Data from these surveys shows that the tooth decay rate in the state has declined about 70% (See Fig 49). An oral health clinical survey, conducted during fall of 2000 and spring 2001 in 16 Indiana counties for the third graders of ages 8-9, indicated that 11.6% of the children had active dental decay at the time of examination and 31.9% of the children have abundant exposure to systemic fluoride sources. Although untreated dental decay and exposure to fluorosis is still a problem in Indiana children, the overall trend indicates that a profound decline in dental caries has occurred.

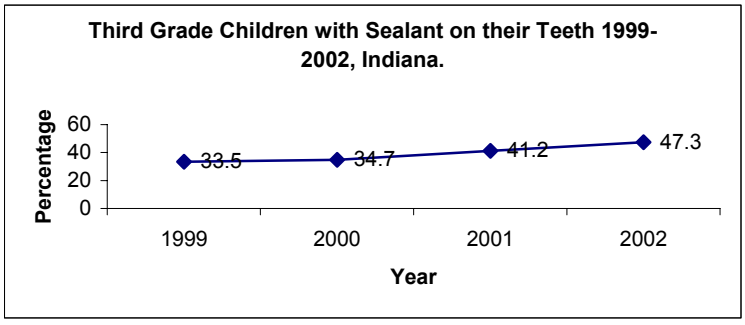
One area progress has been clearly evident is the use of protective dental sealants. In 2002-2003 an annual written dental surveys for Indiana children on their oral health indicated that 47.3% of the third graders had dental sealants. This is a 7% increase from 2001-2002 survey and overall increase of 13.5% since the year 1999-2000 survey (See Fig 50). All survey percentages fell within 95% confidence intervals. Further the data indicates that the use of dental sealants is increasing across all races. 48.1% of whites in third grade had dental sealants in 2002-2003 when compared to only 34.8% in 1999-2000. Likewise, 45% of blacks in the third grade had dental sealants in 2002-2003 when compared to only 29.3% in 1999-2000 (See Fig 51). Indiana is very close to reaching the Healthy People 2010 goal of 50% of children receiving protective sealants on the chewing or occlusal surfaces of permanent molar teeth.

**Figure 49**



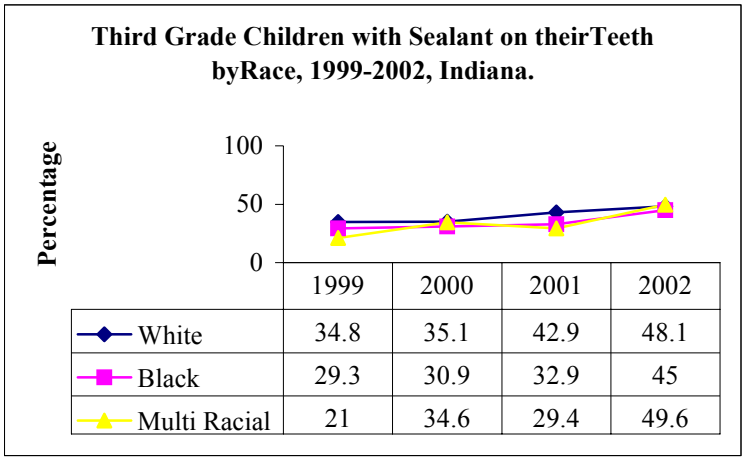

**Source:** Oral Health, Indiana State Department of Health

**Figure 50**



**Source:** Oral Health, Indiana State Department of Health

**Figure 51**




| | 1999 | 2000 | 2001 | 2002 |
|---|---|---|---|---|
| White | 34.8 | 35.1 | 42.9 | 48.1 |
| Black | 29.3 | 30.9 | 32.9 | 45 |
| Multi Racial | 21 | 34.6 | 29.4 | 49.6 |

**Source:** Oral Health, Indiana State Department of Health

Adolescent Mortality: The Healthy People 2010 goal is to reduce the mortality rate in young adults ages 15-19 years to no more than 39.8 deaths per 100,000 population of that age group. In 2002, the Age-specific mortality rate of young adults aged 15 through 24 years was 83.2 per 100,000 population of that age group. Unintentional injury (accidents) took an average of more than 327 adolescent (15-24 years) lives accounting for 43.9% of the lives lost. Intentional injury (homicide, suicide, events of undetermined intent) accounted for 28% of the total lives lost. Malignant neoplasm mortality rate was 4.8 accounting for 5.7% of the total deaths. Motor vehicle accidents are the most common cause of unintentional injury, outnumbering all other accidents in adolescents. In 2002, motor vehicle accidents accounted for 33.5% of the total deaths of this age group.

Homicide was the second most common cause of death in this age group with a rate of 12.06 per 100,000 accounting for 14.5% of the total deaths. Among black youths, homicide accounted for more deaths than all other causes combined. The black male homicide rate for this age group was 147.65 per 100,000 accounting for 64.2% of the total black male deaths of all causes whereas black female homicide deaths accounted for 44% of the total black female deaths recorded during the same period.

Suicide was also a significant cause of death. The rate was 10.8 per 100,000 accounting for 13% of the total deaths in 2002. The number of the suicides for this age group remained stable with an average of 96 deaths per each year between 1999 and 2002.

Adolescent Morbidity: Sexually transmitted disease (STD) prevalence is one area of morbidity that is measurable. For the Healthy People 2010 the goals are to 1) reduce sustained domestic transmission of primary and secondary syphilis to 0.2 cases per 100,000 population, reduce gonorrhea to 19 cases per 100,000 population, and reduce the proportion of adolescents and young adults (15-24 years old) with chlamydia trachomatis infections to 3% of the total

population of that age group; (2) reduce the annual incidence of HIV infection and to reduce the incidence of AIDS aged 13 years and over to no more than 1 of 100,000 population.

Behavioral factors that can increase STD transmission include increases in exchange of sex for drugs, increases in number of anonymous sex partners, decreases in motivation to use barrier protection, and decreases in attempts to seek medical treatment.

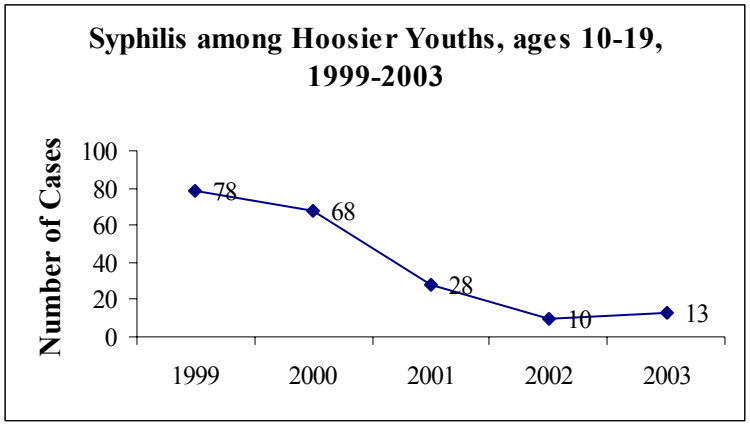
STDs disproportionately affect adolescents and young adults. In 2003, Indiana females aged 10-19 years had the highest reported cases of both chlamydia and gonorrhea among women and Indiana males aged 10-19 had the highest reported cases of both chlamydia and gonorrhea among men.

- Chlamydia is the most commonly reported STD in the United States and is especially high among young women. It is a very dangerous STD as 75% of infected women and 25% of infected men have no symptoms at all. Only recently have economical and practical diagnostic methods been available to physicians. Between 1999 and 2003 in Indiana, the chlamydia incidence rate has worsened among adolescent women. This may be attributed in part to the more accurate tests becoming available. Comparing the total number of adolescent women cases reported in 2003 to 1999 (n = 4,553), an increase of 17.7% was observed.

  In 2003, the total number of reported cases of chlamydia among adolescents of ages 10-19 was 6261; 83.8% of cases occurred to adolescent women and 16.2% occurred to adolescent males. In 2003, the number of reported cases of chlamydia among Indiana adolescent women ages 10-19 was 5,251, a 15.7% increase in the number cases of since 1999. The larger number of cases in women may also be attributed to the added screening sites giving more women opportunity to be tested for chlamydia.

- Syphilis is an STD that also has the etiologic agents role in facilitating human immuno-deficiency (HIV) transmission and compromising women's ability to deliver healthy children. In 1999, syphilis cases increased dramatically due to an outbreak in Marion County. The total number of adolescent (10-19 years) syphilis cases in 1999 was 78, 50% greater than the number of cases found in 1998; and 1998 was an increase over previous years. In 2000, a campaign to eradicate syphilis began and the reduction in the number of syphilis cases was evident. The total number of adolescent syphilis cases in 2003 was 13, a 83% decrease between 1999 and 2003 (See Fig 52). This trend demonstrates the significant progress towards syphilis elimination from the State of Indiana.

**Figure 52**



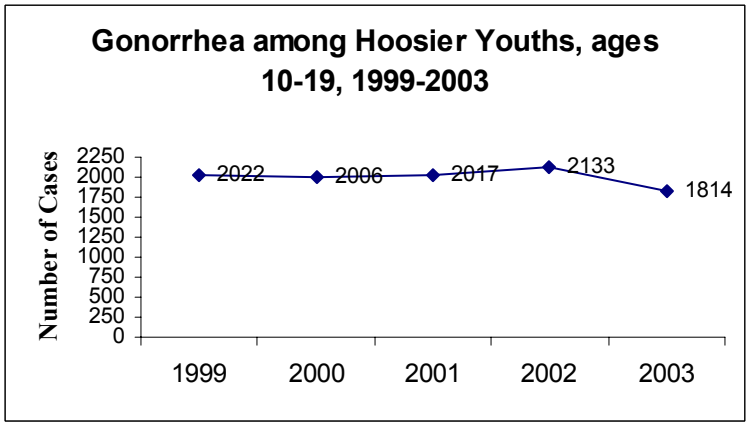

**Source:** Indiana Report of Infectious Diseases: 1999-2003. Indiana State Department of Health

- Gonorrhea is one of the most frequently reported STDs. Four percent of its victims contract Pelvic Inflammatory Disease (PID) if not treated, and it can cause sterility. Adolescent gonorrhea morbidity has been stable in Indiana between 1999 and 2002 and slightly decreased in 2003. The number of adolescent cases in 2003 was 1,814, lowest of all the five years (See Fig 53).

  The number of cases in adolescent females exceeded that of adolescent males in 2003. Of the cases reported with known gender, 1,265 (69.7%) were adolescent females and 464 (25.5%) were adolescent males.

  In 2003, a greater number of cases were reported among black adolescents than among all other racial groups combined. Of gonorrhea cases with known race, 1,091 (60.1%) cases were classified as black adolescents while 365 (20.1%) were classified as white adolescents.

**Figure 53**




Overweight and Obesity in Children and Adolescents: The Healthy People 2010 goal is to reduce the proportion of children and adolescents who are overweight or obese to 5%. Indiana

has a smaller percent of children less than 5 years old (among the WIC population) that are overweight compared to children nationwide. However, overweightedness is on the rise (See Table 19).

Hispanic and American Indian children were more overweight when compared with blacks and whites (See Table 19). In 2002, 24.6% and 12.1% of the young adults (18-24years) were overweight and obese respectively (2002 BRFSS). In 2003 (based on BMIs determined through self reported heights and weights), 11.5% of Indiana high school students stated they were overweight, and 14.2% of the high school students indicated they were at risk of becoming overweight (national rates for the same were 13.5% and 15.4% respectively) (2003 YRBS). In 2003, 32% of Indiana high school students described themselves as overweight, 46.7% percent were trying to lose weight, and 4.8% vomited or took laxatives to lose weight or to keep from gaining weight (national rates for the same were 29.6%, 43.8% and 6%, respectively) (2003 YRBS).

The trend towards obesity in children is on the rise in Indiana. Between 1999 and 2002, the percentage of overweight among children increased for all races. Indiana is unlikely to reach the Healthy People 2010 Goal of reducing the proportion of children who are overweight to 5%.

**Table 19**

**Trend in Prevalence of Overweight Among Children less than 5 Years of Age, 1999 through 2002: Indiana**

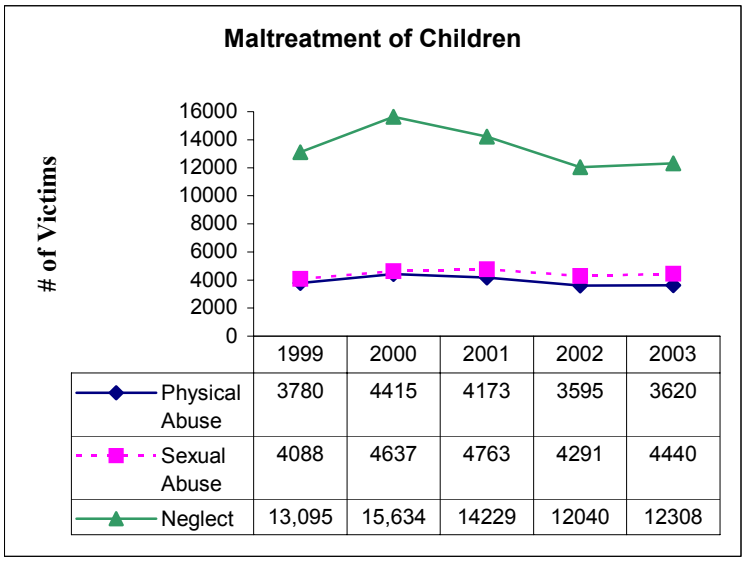
| | 1999 % | 2000 % | 2001 % | 2002 % | 2003 % | 2003 % Nationwide |
|---|---|---|---|---|---|---|
| White | 9.19 | 10.35 | 9.87 | 10.21 | 10.76 | 11.49 |
| Black | 9.14 | 10.74 | 10.55 | 10.84 | 11.25 | 11.95 |
| Hispanic | 13.82 | 14.90 | 13.79 | 14.27 | 15.05 | 16.95 |
| American Indian | 11.38 | 16.67 | 20.26 | 8.18 | 14.56 | 17.36 |
| Asian | 5.37 | 8.69 | 6.71 | 7.55 | 6.84 | 12.12 |
| Total | 9.56 | 10.92 | 10.54 | 10.91 | 11.53 | 13.46 |

**Source:** 2003. Pediatric Nutrition Surveillance System, Centers for Disease Control.
**Notes:** 95th percentile weight-for-length or BMI-for-age, CDC Growth Charts, 2000. Five percent of children are expected to fall above the 95th percentile.

Maltreatment: The Healthy People 2010 goal is to (1) reduce the maltreatment of children to 10.3 per 1000 children under the age 18 years (2) and to reduce child maltreatment fatalities to 1.4 per 100,000 children under the age 18 years. According to the Indiana Family and Social Services Administration, child abuse can be in the form of physical abuse, sexual abuse or neglect. Physical abuse is a serious injury or harm experienced by a child under age 18, caused by a parent or caregiver. Sexual abuse can include injury or harm caused by the child's parent or caregiver, or others who are not providing care or support to the child. Neglect can result from inability, refusal, or neglect by the child's parent or caregiver to supply the child with necessary food, clothing, medical care, education, or supervision.
From 1999 through 2002, there were over 88,740 cases of substantiated or confirmed maltreatment of children, either physical abuse or sexual abuse or neglect (see Figure 54). Of

these victimized children, 46.7% were males and 53.3% were females; 79.6% whites and 20.4% were African Americans.

**Figure 54**




| | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| Physical Abuse | 3780 | 4415 | 4173 | 3595 | 3620 |
| Sexual Abuse | 4088 | 4637 | 4763 | 4291 | 4440 |
| Neglect | 13,095 | 15,634 | 14229 | 12040 | 12308 |

**Source:** Indiana Family and Social Services Administration

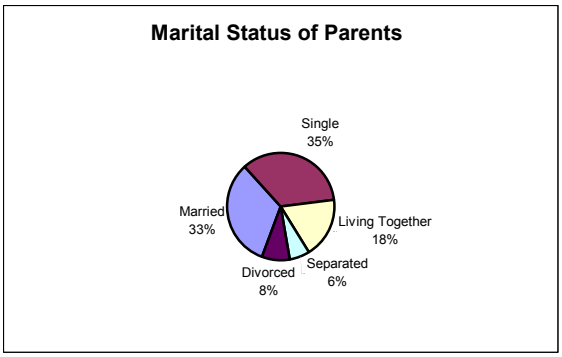
Between 1999 and 2003, average rate of neglect under the age of 18 was 8.99 per 1000 children, physical abuse rate was 2.61 per 1000 children and sexual abuse rate was 2.96 per 1000 children. Unlike physical abuse, sexual abuse has increased in recent years. In 2003, there were more than 4,440 cases of substantiated or confirmed sexual abuse cases, an increase of 360 more cases than in 1999. Further, unlike neglect or physical abuse, sexual abuse has wide difference in number of male and female victims. Between 1999 and 2002, an average of 77.3% of the children in substantiated or confirmed cases of sexual abuse were female.

The 2003 fatality report is the first issued by Family and Social Service Administration (FSSA) using the strict new procedures for reviewing all child deaths in Indiana. According to this report, the number of Indiana children who died from abuse and neglect dropped to 51 in the State Fiscal Year (SFY) 2003 from 69 in 2002. Of the 51 fatalities, 34 (67%) were due to abuse and 17 (33%) were due to neglect. The majority abuse and neglect victims for SFY 2003 were white. For abuse, white victims comprised of 15 of 34 (44%), black 10 of 34 (29%) and 4 of 34 (12%) were Hispanic. For neglect, white victims comprised 12 of 17 (71%), black 3 of 17 (18%) and 1 Asian/Pacific and 1 multiracial each (6%) (see Figure 55).

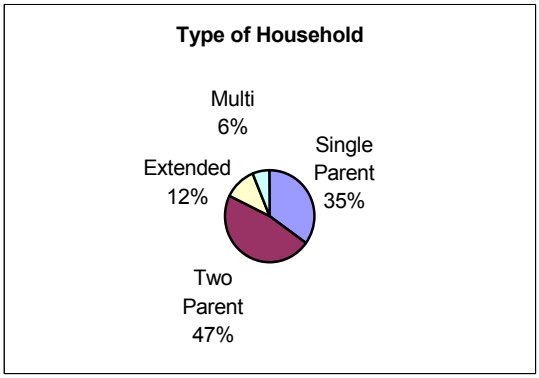
**Figure 55**

**Fatalities from Child Abuse and Neglect in Indiana, 1999-2003**

Marital Status of Parents




Type of Household




**Source:** Indiana Family and Social Service Administration, FY 1999-2003, Child Abuse and Neglect Annual Report.

As shown by the graphs of the family structure in the incidence of fatalities, presence of a single parent or two parents is not related to preventing child abuse or neglect. Fatalities occur in a wide variety of settings and hence a wide variety of approaches or services to prevent the abuse or neglect is necessary.

Tobacco Use**:** The Healthy People 2010 goal is to reduce the use of tobacco products (past month) by students in grades 9 through 12 to 21%, to reduce the cigarette use (past month) by students in grades 9 through 12 to 16%, and to reduce cigars (past month) by students in grades 9 through 12 to 8%.

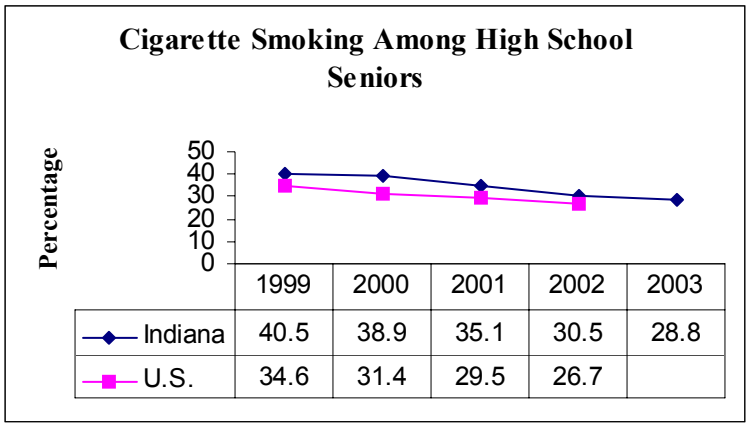
Tobacco use rates among youth continue to decline, according to the Indiana Prevention Resource Center. For the first time, lifetime cigarette use among 10$^{th}$ and 12$^{th}$ graders in Indiana has dropped below the National rates. Between 1996 and 2003, monthly cigarette smoking by 10$^{th}$ graders dropped from 36.7% to 22.2%, a 14.4% decrease and the monthly cigarette smoking by 12$^{th}$ graders dropped from 39.8% to 28.8%, a 12.2% decrease. The decreases in tobacco use were almost universal. Comparing 2003 rates with 1996 rates, about 73,800 fewer Indiana children and adolescents smoke cigarettes on a monthly or more frequent basis than before; about 51,200 fewer Hoosier youth smoke cigarettes daily and about 36,500 fewer smoked a half pack or more per day. If this pattern continues, Indiana could achieve the Healthy People objective for 2010 of reducing current smoking rates among high school students to less than 16%.

Use of smokeless tobacco has fallen steadily during 1998 and 2003, but still remains a male habit as defined by the 1994-1999 needs assessment. In 2003, 5.8% of Indiana male 12$^{th}$ grades report using smokeless tobacco at least once in a month compared to 0.7 % of the female cohort.

Cigarette smoking and smokeless tobacco use decreased for all grades except 6th graders, where significant increases are found for annual and monthly prevalence. Monthly use of cigarettes for the 6th graders increased from 4.8% in 2002 to 5.1% in 2003 whereas annual use of cigarette slightly increased from 9.4 % to 9.5%. Much stronger action is needed at state level to reduce tobacco smoke among 6th graders (Fig. 58 and 59).

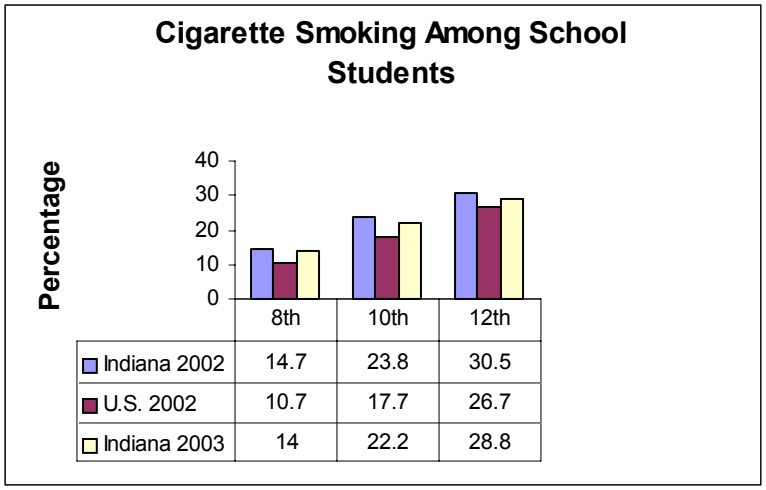
Overall 2003 data on tobacco use suggest that the tobacco cessation programs are working and are an excellent investment for Indiana. The factors that might have contributed to the decline in cigarette use in youth may be increased school-based efforts to prevent tobacco use, increased exposure to youth to both state and national mass media smoking prevention campaigns. Reducing youth smoking further will require that Indiana implement comprehensive, effective and sustainable tobacco-control programs including youth-oriented mass media campaigns, increased tobacco excise tax, smoke-free policies for schools and other community venues, greater regulation of tobacco products and school based health programs (see Figures 56 through 59).

**Figure 56**



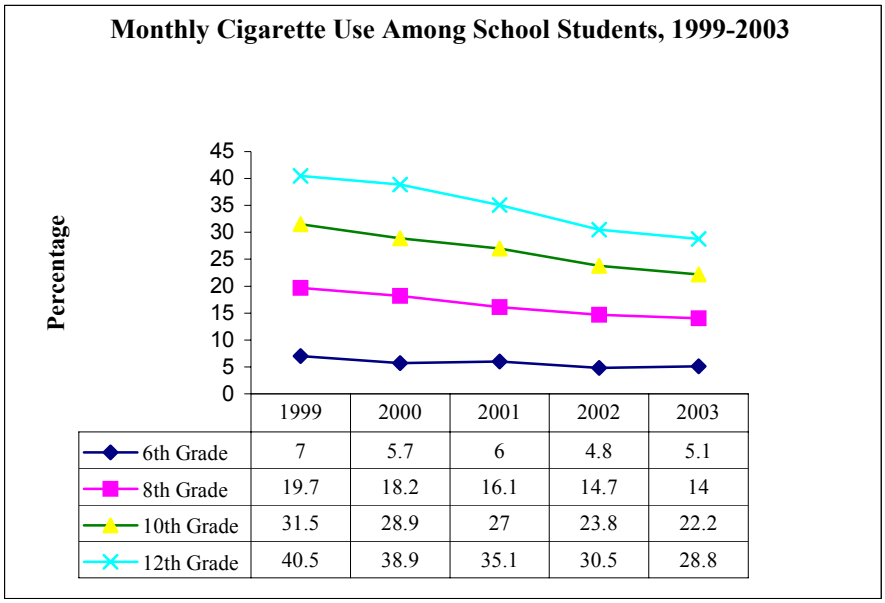

**Source:** Alcohol Tobacco and Other Drug Use, Indiana Prevention Resource Center

**Figure 57**




**Source:** Alcohol Tobacco and Other Drug Use, Indiana Prevention Resource Center

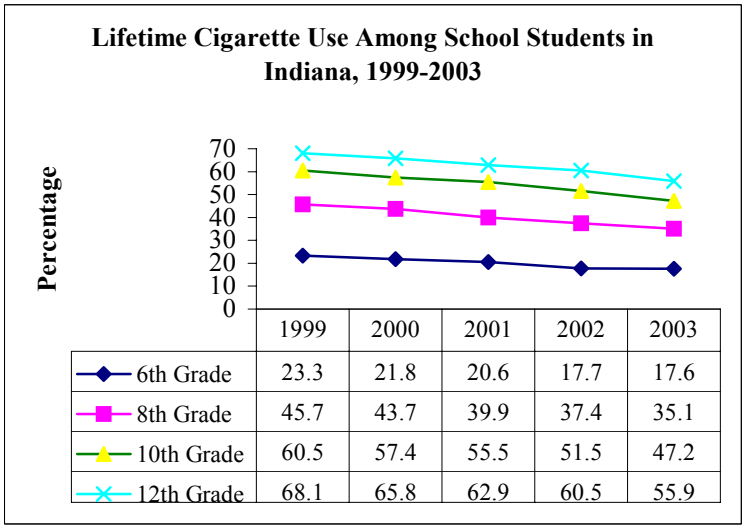
**Figure 58**




| | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| 6th Grade | 7 | 5.7 | 6 | 4.8 | 5.1 |
| 8th Grade | 19.7 | 18.2 | 16.1 | 14.7 | 14 |
| 10th Grade | 31.5 | 28.9 | 27 | 23.8 | 22.2 |
| 12th Grade | 40.5 | 38.9 | 35.1 | 30.5 | 28.8 |

**Source:** Alcohol Tobacco and Other Drug Use, Indiana Prevention Resource Center

**Figure 59**




| | 1999 | 2000 | 2001 | 2002 | 2003 |
|---|---|---|---|---|---|
| 6th Grade | 23.3 | 21.8 | 20.6 | 17.7 | 17.6 |
| 8th Grade | 45.7 | 43.7 | 39.9 | 37.4 | 35.1 |
| 10th Grade | 60.5 | 57.4 | 55.5 | 51.5 | 47.2 |
| 12th Grade | 68.1 | 65.8 | 62.9 | 60.5 | 55.9 |

**Source:** Alcohol Tobacco and Other Drug Use, Indiana Prevention Resource Center

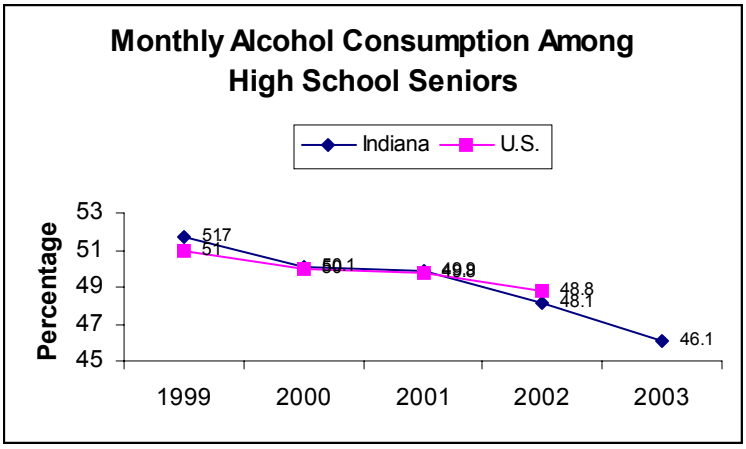
Alcohol and Substance Abuse: Healthy People 2010 goals for adolescents, age 12-17, include decreasing alcohol use to 11% and marijuana use to 0.7%. According to the 2003 Indiana Youth Risk Behavior Survey, 77.8 percent of students reported having had one or more drinks in their lifetime, and 28.9 percent had five or more drinks of alcohol on one or more occasions during the past 30 days. However, results for the 2003 report when compared to 1991 show significant decreases in most prevalence measurements for grades for alcohol use.
For the year 2002, 48.6% of high school seniors consumed alcohol at the national level. In Indiana the rate remained lower than the national level at 48.1%, and declined to 46.1 for the

following year. Similarly, at the national level in 2002, 19.6% of the 8th grade students reported consuming alcohol at least once a month. In Indiana the rate for 8th grade students was 24.9% and declined to 24.3% the following year. Significant increases were found for annual and monthly alcohol prevalence of 6th graders. Between 2000 and 2003, the monthly use of alcohol by Indiana 6th graders was increased by 0.7% while the annual use of alcohol increased by 0.4%. The prevalence rates for several drugs among Indiana 6th graders suggest that this group should be closely monitored in the future and, if true increases are observed, there is a need for realignment of prevention efforts (see Figures 60,61, and 62).

Interestingly, monthly use of marijuana has fallen sharply in recent years. For example, at the national level in 2002, 21.5% of the high school seniors reported using marijuana at least once in a month. In Indiana, the rate was below the national level at 20.5%, and declined to 19.8% the following year. Monthly use of psychedelics by high school students in Indiana also has fallen from 12.8% in 2002 to 10.6% in 2003. The national rate for use of psychedelic drugs in 2002 was 12 %. Use of cocaine, prescription drugs, and similar illicit drug use was approximately the same as reported in 2002. However, inhalant use shows signs of increase among younger adolescents (6th through 8th graders). There were no increases in similar drug use among older adolescents (11th and 12th graders) [see Figure 63].

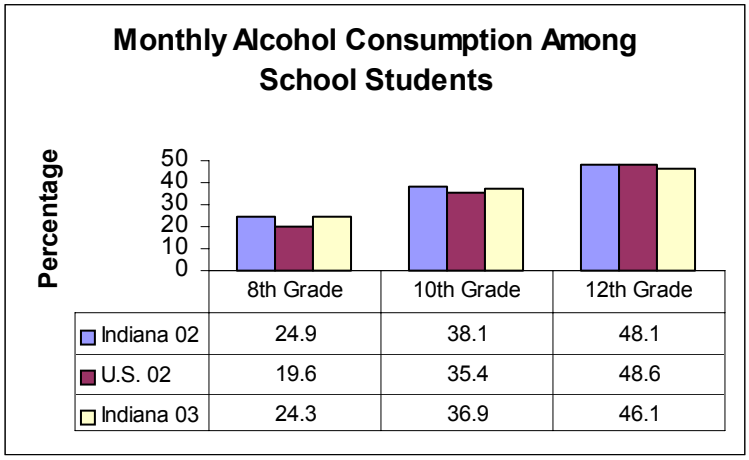
Unlike other drugs, cocaine usage levels remained high and above the national rate for all the grades. For example, cocaine use at least once a month averaged 2.3 % nationwide among high school seniors in 2002. The Indiana rate was 2.9%, but declined to 2.5% the following year.

**Figure 60**



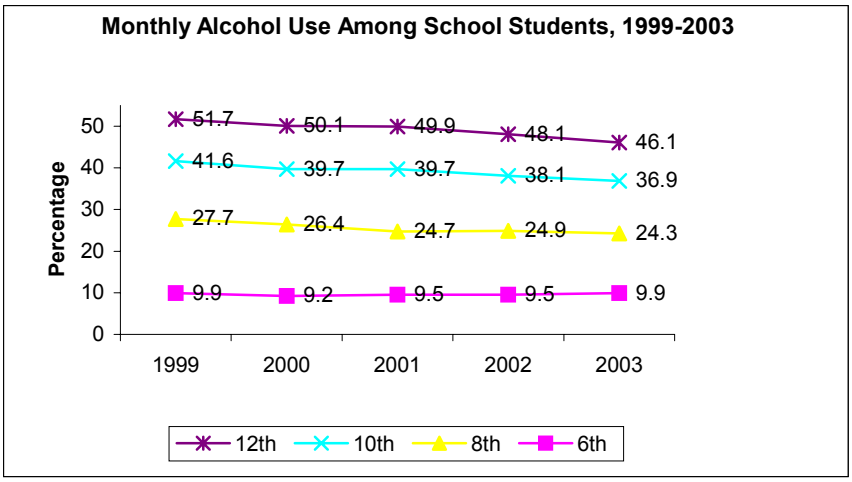

**Source:** Alcohol, Tobacco and Other Drug Use Survey, Indiana Prevention Resource Center

**Figure 61**



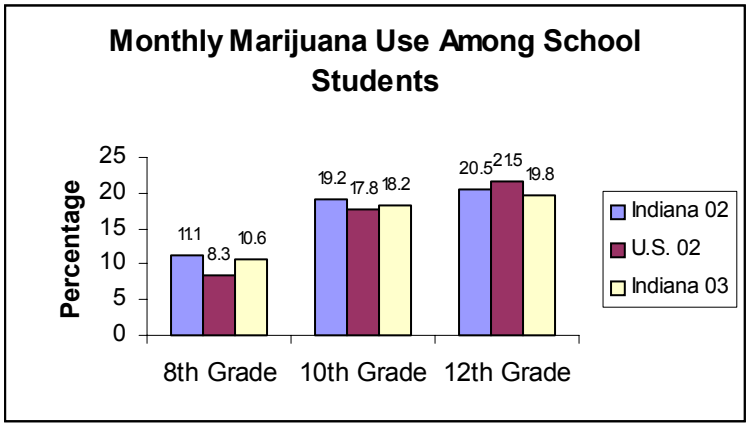

**Source:** Alcohol, Tobacco and Other Drug Use Survey, Indiana Prevention Resource Center

**Figure 62**




**Source:** Alcohol, Tobacco and Other Drug Use Survey, Indiana Prevention Resource Center

**Figure 63**



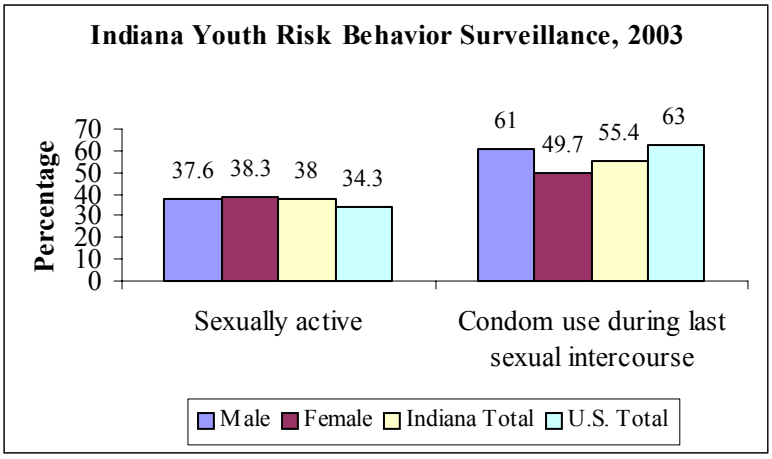

**Source:** Alcohol, Tobacco and Other Drug Use Survey, Indiana Prevention Resource Center.

Early Sexual Activity: The Healthy People 2010 goals are to decrease sexual intercourse among adolescents less than 15 years old to 12% and among adolescents of 15 to 17 years olds to 25%; to increase condom use at first intercourse to 75% among unmarried young women aged 15-17 and to 83% among unmarried young men aged 15-17. The 2003 Indiana Youth Risk Behavior Survey (YRBS) suggests that 48.8 percent of high school students statewide reported ever having had sexual intercourse and 38.0 percent reported that they had sexual intercourse during the 3 months preceding the survey (i.e., currently sexually active). The survey shows that 55.4 percent of Indiana high school students reported having used a condom during last sexual intercourse (See Table 20 and Fig. 64). This is a long way from reaching the goal of 75% condom usage.

**Table 20 Indiana Youth Sexual Behavior**

| Category | Percents | |
|---|---|---|
| | **Indiana** | **National** |
| Ever had sexual intercourse | 48.8 | 46.7 |
| Currently sexually active | 38 | 34.3 |
| Used a condom during last sexual intercourse | 55.4 | 63 |
| Source: 2003 Indiana Youth Risk Behavior Survey, Indiana State Department of Health. | | |

**Figure 64**




**Source:** 2003 Indiana Youth Risk Behavior Survey

## C. Children with Special Health Care Needs (CSHCN):

Children with special health care needs (CSHCN) are at risk for long-term health risks and require more extensive services than children without special needs. They require services from specialty physicians, mental health providers, physical, speech or occupational therapists, dieticians and home health agencies. Personal characteristics and social circumstances of each child are different and therefore a better understanding of the needs of each CSHCN child is of great importance.

Prevalence: The National Survey of Children with Special Health Care Needs, sponsored by the Maternal and Child Health Bureau, provides national and state-level information about the numbers of children and youth, 0 - 17 years old, in the population with special health care needs. Based on the results of the National Survey on CSHCN, the prevalence rate of children and youth in Indiana having the limitations in functioning is 14.2% while the national prevalence rate is 12.8%. CSHCN Prevalence rate by age group is shown in Table 21. A higher percentage of children ages 0-5 and ages 12-17 in Indiana havespecial health care needs than children nation wide.

**Table 21**

| CSHCN Prevalence by Age, Indiana & Nation | | |
|---|---|---|
| *Age* | *Indiana%* | **Nation (%)** |
| Children 0-5 years of Age | 10.2 | 7.8 |
| Children 6-11 years of Age | 15 | 14.6 |
| Children 12-17 years of Age | 17.4 | 15.8 |
| **Source:** Child and Adolescent Health Measurement Initiative (2004). Children and Youth with Special Health Care Needs, Data Resource Center on Child and Adolescent Health Website. Retrieved 01/14/2005 from www.cshcndata.org | | |

Gender differences in prevalence rates are apparent. In Indiana, 17.3% of the males with ages 0-17 years have special health care needs when compared to only 11% of the females. In the nation, the percentages of males and females having special health care needs were 15 and 10.5 respectively.

Indiana CSHCN prevalence rates also vary by race. In Indiana, 14.5% of whites, 13.8% of blacks, 10.1% of Hispanics and 15.2% of multiracial children and youth ages 0-17 years old have special health care needs. These rates were not different or were slightly better when compared to CSHCN prevalence rates by race nationwide (see Table 22).

**Table 22**

| CSCHN Prevalence by Race/Ethnicity | | |
|---|---|---|
| | *State* | *Nation* |
| Hispanic | 10.1 | 8.5 |
| White | 14.5 | 14.2 |
| Black | 13.8 | 13 |
| Multiracial | 15.2 | 15.1 |
| **Source:** Child and Adolescent Health Measurement Initiative (2004). Children and Youth with Special Health Care Needs, Data Resource Center on Child and Adolescent Health Website. Retrieved 01/14/2005 from www.cshcndata.org. | | |

The CSCHN prevalence rate in Indiana children is highest at 100%-199% Federal Poverty Level (FPL), (see Table 23). Differences are observed in Indiana and nation's CSCHN prevalence rates by poverty level. At 0%-99% & 400% FPL's, the CSHCN prevalence rate in Indiana children is same as that of the children in nation wide (13.5 vs. 13.6 & 13.6 vs. 13.6), but at 100-199% and

at 200-399% FPL's, the CSHCN prevalence rates in Indiana children was higher than the children nationwide (See Table 23).

**Table 23**

| Prevalence Rate CSHCN by Poverty Level, 0-17 Years Old | | |
|---|---|---|
| FPL | State | Nation |
| 0% -99% FPL | 13.5 | 13.6 |
| 100%-199% FPL | 17.1 | 13.6 |
| 200%-399% FPL | 14.3 | 12.8 |
| 400% FPL or greater | 13.6 | 13.6 |
| **Source:** Child and Adolescent Health Measurement Initiative (2004). Children and Youth with Special Health Care Needs, Data Resource Center on Child and Adolescent Health Website. Retrieved 01/14/2005 from www.cshcndata.org<br>Foot Notes:<br>FPL: Federal Poverty Level | | |

It is estimated that 218,314 children ages 0-17 years old in Indiana have special health needs. Among the estimated 218,314 children with special health care needs, 23.1% or 50,212 children are between 0-5 years age, 36.7% or 80,776 children are between 6-11 years of age and 40.2% or 87,762 children are between 12-17 years of age. The majority of children with special health care needs are males (62.3%).

Functional limitation will hinder the daily activities of CSHCN. It is estimated that in Indiana, 38.2% of CSHCN had their daily activities moderately affected some of time and 21.2% had their daily activities consistently affected due to illness. In addition, functional limitation of CSHCN resulted in school absences. The following Table 24 shows the percentage of CSHCN and days of school absences in Indiana.

**Table 24**

| **% of CSHCN** | **Days missed** |
|---|---|
| 53.1% | 0-3 days |
| 20.8% | 4-6 days |
| 12.3% | 7-10 days |
| 13.8% | 11 or more days missed |
| **Source:** Child and Adolescent Health Measurement Initiative (2004). Children and Youth with Special Health Care Needs, Data Resource Center on Child and Adolescent Health Website. Retrieved 01/14/2005 from www.cshcndata.org. | |

Indiana Children's Special Health Care Services (CSHCS) is ISDH's program that helps families of children with serious, chronic medical conditions pay for primary care and treatment related to their child's condition. A family with an income before taxes no greater than 250% of the federal poverty level may be eligible for the program. This program is designed to assist Indiana children ages newborn to 21 years old with severe chronic medical conditions that have lasted (or are expected to last) at least two years, will produce disability or disfigurement or limits on function, require special diet or devices, or would produce a chronic disabling physical condition, if untreated. CSHCS covers twenty-three diagnostic groups that include well over a thousand specific conditions.

Between 1996 and 2002, the number of newly enrolled children decreased from 1370 to 1074, a 21.6% decrease and the number of active children participating in the CSHCS program increased from 4,551 to 8,492, a 86.5 % increase (See Table 25).

**Table 25**

| **CSHCS Program Outreach** | | |
|---|---|---|
| **Year** | **Newly Enrolled Children** | **Active Children** |
| 1996 | 1,370 | 4,551 |
| 1997 | 2,287 | 6,225 |
| 1998 | 2,149 | 7,197 |
| 1999 | 2,011 | 7,624 |
| 2000 | 1,685 | 8,119 |
| 2001 | 1,229 | 8,420 |
| 2002 | 1,074 | 8,492 |
| 2003 | 1438 | 8,555 |
| **Source:** Indiana State Department of Health | | |

Table 26 shows the top ten diagnosis for the year 2003 and the number of children with special health care needs enrolled with each diagnosis. Asthma has the highest number of clients (1,858) followed by convulsions (1,759) and cerebral palsy (1,621).

**Table 26**

| **Children with Special Health Care Needs Top 10 Diagnosis Client Count for CY 2003** | | |
|---|---|---|
| **No** | **Diagnosis Description** | **Count** |
| 1 | Asthma, Unspecified | 1,858 |
| 2 | Convulsions NEC | 1,759 |
| 3 | Cerebral Palsy NOS | 1,621 |
| 4 | Perinatal Chronic Respir. Distress | 857 |
| 5 | Congenital Heart Anomaly NOS | 808 |
| 6 | Congenital Hydrocephalus | 732 |
| 7 | Respiratory Abnorm NEC | 702 |
| 8 | SensorNeur Hear Loss NOS | 634 |
| 9 | Lack Of Coordination | 604 |
| 10 | Down's Syndrome | 539 |
| 10 | Esophageal Disorder NOS | 539 |
| **Source:** Epidemiology Resource Center, Indiana State Department of Health<br>NEC means Not Elsewhere Classified<br>NOS means Not Otherwise Specified | | |

Asthma In Children: Severe asthma is the number one diagnosis in the CSHCS program. However, the prevalence in Indiana is higher than reflected in the CSHCS program. Asthma is the most common chronic disease in children and is one of the leading causes of missed school

days. In 2001, Indiana BRFSS survey data indicated that 30.1% of people with asthma were diagnosed before the age 10. According to the 2002 BRFSS survey, 15.7% of Indiana households have at least one child who has ever been diagnosed with asthma. Of those households, 71.8% reported at least one child who currently has asthma.

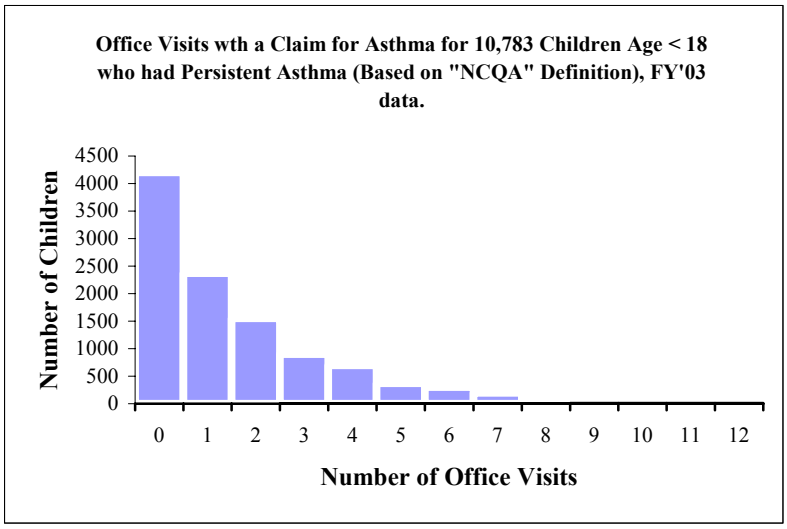
Prevalence of asthma is greater in young boys. The hospitalization rate is highest in males, especially among black males under age 5. However, this trend of prevalence and hospitalizations reverses during puberty. From that age, females have the highest prevalence and hospitalization rates for asthma.

The following data shows the severity of asthma in a cohort of 23,161 children ages 0-17 who were continuously enrolled in Medicaid for at least 11 of 12 months during fiscal year 2003. Cases selected for inclusion used the Office of Medicaid Policy and Planning (OMPP) case definition of asthma and included only those with paid claims:

- 18% had an emergency room visit with any diagnosis of asthma;
- 6% were hospitalized with any diagnosis of asthma;
- 10% had an emergency room visit with a principal diagnosis of asthma;
- 4% were hospitalized with a principal diagnosis of asthma.

Although asthma cannot be prevented or cured, asthma attacks can be controlled. Doctors' advice is essential in preventing asthma attacks. It is recommended by the National Heart Lung and Blood Institute (NHLBI) that patients with asthma have at least two scheduled visits annually to care for their asthma. The majority of children in Indiana Medicaid with asthma do not receive this recommended level of care. See Fig 65.

**Figure 65**




**Source:** The Burden of Asthma in Indiana, Indiana State Department of Health
**Notes:** Office visit is as defined by the National Committee for Quality Assurance (NCQA) criteria. The ICD-9 code for asthma need not be the principal diagnosis.

Because the HRSA definition of CSHCN is very broad, the issue of HIV/AIDS in children and adolescents is included in the discussion of CSHCN.

HIV/AIDS Prevalence in Children and Adolescents: By the end of December 2003 there were a total of 4,034 cumulative HIV cases reported in the State of Indiana (see Table 16). Eighty percent (n = 3,224) of all the HIV reported cases were males and 20% (n=810 ) were females (see Table 28). A total of 810 HIV cases were reported in females with a point prevalence of 26 per 100,000 females. Of the 810 female HIV cases, 47% (n=384) were white, 48% (n = 391) were black and 4% (n=30) were Hispanic (See Table 18).

There were 156 adolescent (ages 13-19) HIV cases reported in Indiana with a prevalence rate of 25 cases per 100,000 adolescents (See Table 16); 17 cases of children ages 5-12 years with HIV; and 30 cases of children less than 5 years. The overall HIV prevalence rate in Indiana was approximately 66 cases per 100,000 residents.

Similarly at the end of December 2003, there were a total of 7415 cumulative AIDS cases reported in the State of Indiana (See Table 16). Eighty-eight percent (88 %) (n= 6525) of all the reported AIDS cases were white and 12% (n=890) of all the AIDS reported cases were of females (see Table 17). Of the 890 female AIDS cases, 52% (n= 462) were white, 44% (n=389) were black and 4% (n=32) were Hispanic (See Table 18). Fifty adolescent (ages 13-19) AIDS cases were reported in Indiana with a prevalence rate of 8 cases per 100,000 adolescents. The overall AIDS prevalence rate for the State was 121 cases per 100,000 residents.

**Table 16: Cumulative Indiana HIV and AIDS Cases Reported Through December 31, 2003**

| Age at Diagnosis | HIV Cases | % | AIDS Cases | % |
|---|---|---|---|---|
| <5 | 30 | 1% | 38 | <1% |
| 5-12 | 17 | 0% | 16 | 0% |
| 13-19 | 156 | 4% | 50 | <1% |
| 20-29 | 1,457 | 36% | 1,415 | 19% |
| 30-39 | 1,560 | 39% | 3,457 | 47% |
| 40-49 | 616 | 15% | 1,730 | 23% |
| 50+ | 198 | 5% | 709 | 10% |
| Unknown | 0 | 0% | 0 | 0% |
| Total | 4,034 | 100% | 7,415 | 100% |

**Source:** HIV/STD Quarterly Reports, Indiana State Department of Health,
**Technical Notes**:

- Totals may not add to 100% due to rounding.
- Cases in the HIV registry and the AIDS registry are distinct numbers. When a case meets the surveillance case definition of AIDS, it is moved from the HIV registry to the AIDS registry. This results in non-cumulative totals for HIV.

**Table 17: Indiana HIV/AIDS Cumulative Cases by Gender Through December 31, 2003.**

| Sex | Indiana HIV | | Indiana AIDS | |
|---|---|---|---|---|
| | Cases | % | Cases | % |
| Male | 3,224 | 80 | 6,525 | 88% |
| Female | 810 | 20 | 890 | 12% |
| Total | 4,034 | 100 | 7,415 | 100% |

**Source:** HIV/STD Quarterly Reports, Indiana State Department of Health
**Technical Notes:**

- Totals may not add to 100% due to rounding
- Cases in the HIV registry and the AIDS registry are distinct numbers. When a case meets the surveillance case definition of AIDS, it is moved from the HIV registry to the AIDS registry. This results in non-cumulative totals for HIV.

**Table 18: Indiana HIV/AIDS Cumulative Cases by Race Through December 31, 2003**

| Race | Indiana HIV | | | | Indiana AIDS | | | |
|---|---|---|---|---|---|---|---|---|
| | Male | % | female | % | Male | % | Female | % |
| White | 1,995 | 62% | 384 | 47% | 4,589 | 70% | 462 | 52% |
| Black | 1,059 | 33% | 391 | 48% | 1,671 | 26% | 389 | 44% |
| Hispanic | 146 | 4% | 30 | 4% | 245 | 4% | 32 | 4% |
| Other | 24 | 1% | 5 | 1% | 20 | 0% | 7 | 0% |
| Total | 3,224 | 100% | 810 | 100% | 6,525 | 100% | 890 | 100% |

**Source:** HIV/STD Quarterly Reports, Indiana State Department of Health
**Technical Notes**:

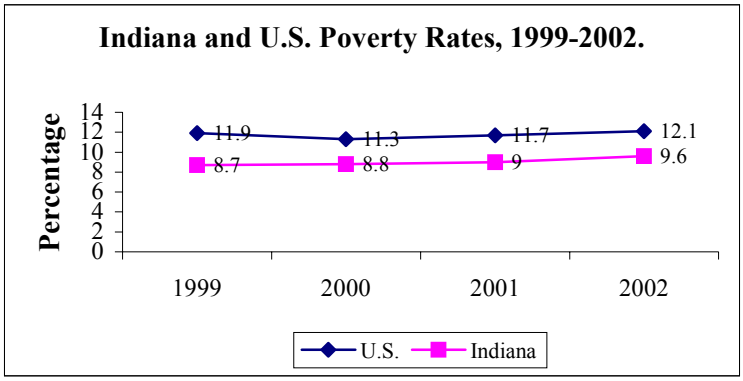
- Totals may not add to 100% due to rounding
- Cases in the HIV registry and the AIDS registry are distinct numbers. When a case meets the surveillance case definition of AIDS, it is moved from the HIV registry to the AIDS registry. This results in non-cumulative totals for HIV.

**4. Indiana's MCH Program Capacity by Pyramid Levels:**

**a. Direct Health Care Services:** The ability of Indiana's citizenry to access health care and health related services is directly related to their ability to pay for those services, their cultural and ethnic comfort level with the providers, and the availability of preventive, primary and specialty care providers in the state. The capacity of programs and services in Indiana to ensure access to direct health care services will be explored in this section.

- Financial Access: Indiana's poverty rate in 2002, according to the Small Area Income and Poverty Estimates (SAIPE), is at 9.6%, below the national rate of 12.1%. However, the trend since 1999 has been an increase of poverty in the state Fig. 66).

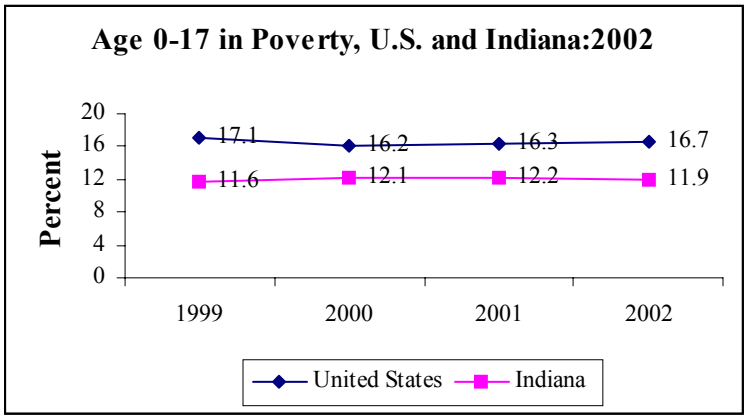
**Figure 66**




**Source:** U.S. Census of Bureau, Small Area Income and Poverty Estimates (SAIPE) program estimates, 1999-2002.

Among children under 18 years of age, the SAIPE estimated that 189,929 or 11.9% of the Indiana children were poor. Again the trend from1999-2002 for children is an increase in poverty with a slight decrease in percent in 2002 (see Fig. 67). The Indiana poverty rate for children under five, the most likely to be poor, was 14.5%, less than the national rate of 19%.

**Figure 67**




**Source:** U.S. Census of Bureau, Small Area Income and Poverty Estimates (SAIPE) program estimates, 1999-2002.

Temporary Assistance for Needy Families (TANF), previously known as Aid to Families with Dependent Children, provides cash assistance and supportive services to assist families with the goal to help them gain economic self-sufficiency. To be eligible for TANF in Indiana, a family of one must have a monthly household income that is less

than 35.9% of the income level of 100% of the federal poverty level (gross income eligibility limit for a family of one is $286.75 and 100% FPL for family of one is $798); a family of 4 must have a monthly household income of less than 44.1% of the income level of 100% of the federal poverty level (gross income eligibility limit for a family of four is $712.25 and 100% FPL for a family of four is $1,613). There has been a 2% drop in families receiving regular TANF from January 2004 to January 2005 with an 18% drop in adult recipients and an 18.5% drop in child recipients. There has been a 23% drop in families receiving TANF due to an unemployed parent with a 23% drop for both adult and child recipients during the same time frame. On the other hand, the number of households receiving food stamps has increased from 221,856 to 240,070 (8% increase).

Indiana has a higher percentage of children aged 18 and under covered by private/employer-based health insurance than the nation (69.6% to 62% respectively) and a lower percent of Medicaid/SCHIP recipients (20.8 % to 26.3% respectively). However, only 61.4% of children eligible for Medicaid/SCHIP are enrolled in the program. Indiana does have a lower percent of uninsured children than the nation (9.6% to 11.7% respectively). According to the March of Dimes Peristat data, Indiana has a lesser percent of women of childbearing age (15-44 years) who are uninsured than the nation (16.7% vs. 19.6% respectively). Of the pregnant women who delivered babies in 2000, 42% were on Medicaid for pregnant women. In 2003 and 2004, an estimate of 50% of the pregnant women who delivered were on Medicaid.

Friendly Access prenatal surveys that were completed in two hospitals in Marion County had questions regarding accessing prenatal care. The responses indicated that 97.3% of those taking the survey had no barriers to accessing care. Of those who did, 13% did not get care due to lack of money or insurance to pay for the care. Friendly Access pediatric surveys were completed in public clinics in Marion County. When asked whether parents had trouble paying for their child's health care in the last year, 95.3% indicated they did not; only 4.7% indicated they did have a financial barrier to access to care for their children.

For this needs assessment and for the AMCHP Action Learning Lab on Perinatal Disparities Project within MCSHC, MCSHC subcontracted with the Indiana Perinatal Network (IPN) and the Institute for Action Research in Community Health (IARCH) to conduct Community Conversation Town Meetings in the six most populous counties in Indiana. There were nine consumer meetings and six provider meetings held. Data indicates that Barriers to Access to Care was issue number 3 out of 5 in the overall data; in Lake and Vanderburgh Counties it was issue number one. Interestingly, in these two counties both providers and consumers prioritized barriers to access to care equally; however, in general, providers prioritized barriers to access to care more than consumers. There was no indication in these town meetings that financial limitations was a priority barrier to care.

In the focus groups done in Marion and Lake County for this needs assessment, there was an indication that for some of the participants, finances impacted their decision about when and where to go for pregnancy care. However, there were many other influences,

like family and friends, pre-existing medical conditions, negative experiences, and the perception that people with Medicaid do not receive the same quality of services as others, that were mentioned as barriers before finances. However, in the 2002 Behavior Risk Factor Surveillance System (BRFSS), 5.6% of the Indiana residents said that there was a time in the past 12 months when they needed medical care but could not get it. When asked for a reason, 55.3% of them said that the main reason was cost.

- Cultural Acceptability—Indiana's minority populations have grown between 1990 and 2000; the black population grew 18%, the Asian population grew 62%, the American Indian population grew 24%. The Hispanic population grew from 1.8% to 3.5% of the total population. Disparity in pregnancy outcome statistics has not decreased and with Hispanics has increased.

  In an effort to discern cultural barriers which may impact perinatal health, MCSHC contracted, in conjunction with IPN and the Marion County Health Department, to hold the focus groups (previously mentioned) in Lake and Marion Counties. Nearly 115 at-risk pregnant and parenting women and adolescents participated in one of 13 focus groups over a five month period. The focus groups were skewed to low income and minority women and were developed to supplement the information collected on the Friendly Access Prenatal and Pediatric Surveys.

  Friendly Access Prenatal Surveys included responses from 49% African American mothers, 12% Hispanic, and 12% of women who were born in a country other than the United States. While 60% of those surveyed said their provider was from a different race or ethnic group, almost all (96%) said this made no difference in the care they received. This perception was upheld in the Friendly Access Pediatric Survey done in Indianapolis. While 45% of the respondents noted the provider came from a different racial/ethnic background, only 1% felt it made any sort of difference in the care the child received.

  However, 24% of the respondents would not recommend their provider to someone who does not speak English very well. The Hispanic respondents reported greater barriers and challenges—many based on language. The Hispanic participants experienced longer phone waits when making an appointment with their provider; they had to wait longer for a scheduled appointment (more than 2 weeks); they indicated they waited longer in the office before seeing the provider (30.6% Hispanic pregnant women vs. 16.7% non-Hispanic and 63% Pediatric Survey Hispanic respondents vs. 28 % non-Hispanic respondents estimated they waited more than 30 minutes before seeing their provider); and more Hispanic participants in both surveys did not have a phone number to call for after hours help. While there were more complaints about office acceptability, in general Hispanics rated the quality of their care higher than non-Hispanics.

  The demographics from the Community Conversations (Town Meeting) consumer participants revealed that 27% of the 174 participants were African American, 13% were Caucasian, 3% were Asian, and 57% were Hispanic (race not differentiated); thus, most were minorities. The language barrier was the primary barrier to access to care in the groups facilitated in Spanish or with Burmese interpreters and there were more comments

about caring clinical providers; whereas, groups facilitated in English commented more about supportive behaviors from family, friends and non-clinical providers.

ISDH has since 2001 offered Cultural Awareness Training through the Office of Cultural Diversity and Enrichment and has contractually mandated annual attendance of grantee staff. Also, annually a grantee survey is compiled to determine how culturally welcoming the grantees are. That survey revealed that 57% of the grantee had made changes and advances to promote cultural competence in the past year. Cultural competence training is available from other sources than ISDH and the grantees have utilized both ISDH and those trainings to comply contractually. Sixty-one percent of the grantees offer media which displays different culture in their project. The overall rating for cultural competence of all grantee/contract programs was 66%.

MCSHC staff has been working closely with the Indiana Minority Health Association and some of their 26 local coalitions in setting up the Focus Groups and Community Conversations and in developing further data gathering through the Baby First Outreach Worker Pilot Project in Marion County, IN. Through these data, MCSHC is trying to determine interventions acceptable to the communities that will impact the high disparities.

- Availability of Prevention and Primary Care Services—In Indiana, twenty-five counties in whole and fourteen counties in part were designated as Health Professional Shortage Areas (HPSAs) for primary health care providers. In addition, eighteen counties in whole and seven counties in part were designated as HPSAs for mental health providers and eight counties in whole and nine counties in part were designated as HPSAs for dental health providers (see Fig. 68, 69, and 70).

**Figure 68**

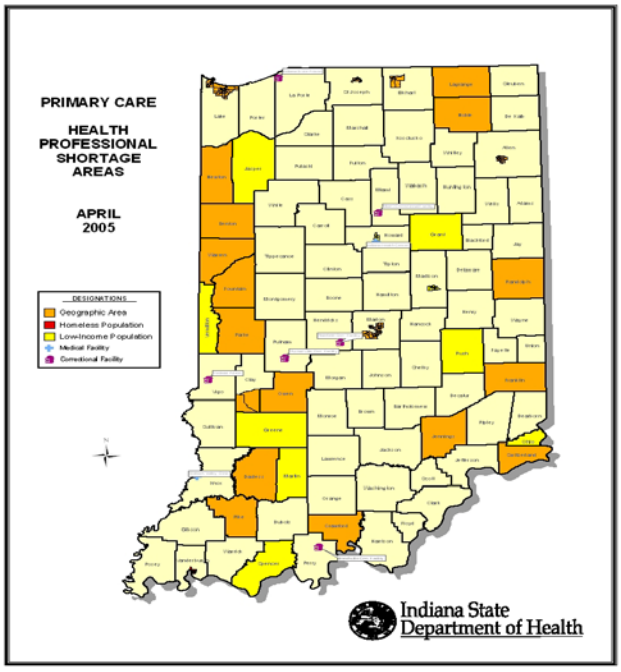


**Figure 69**

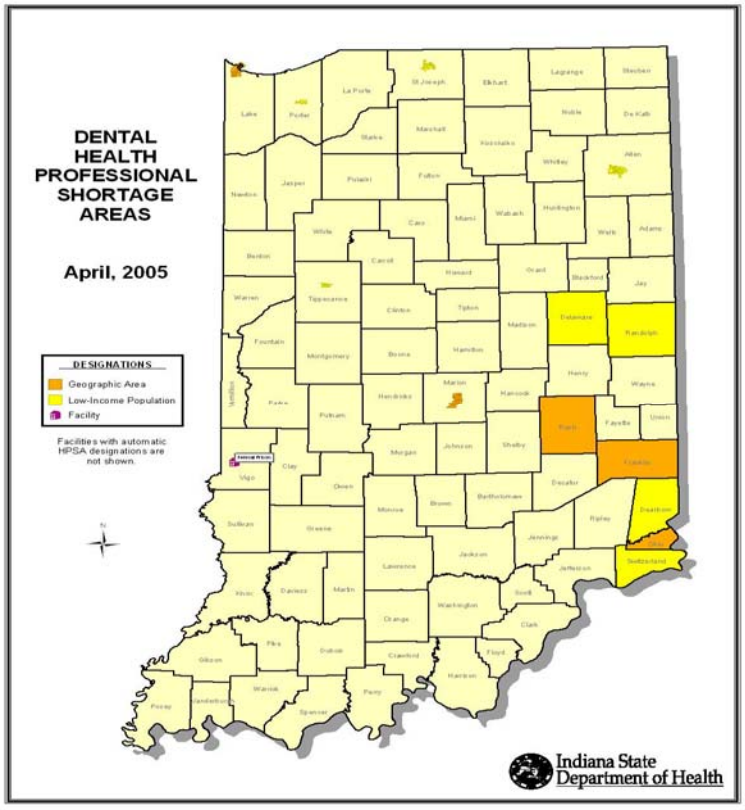
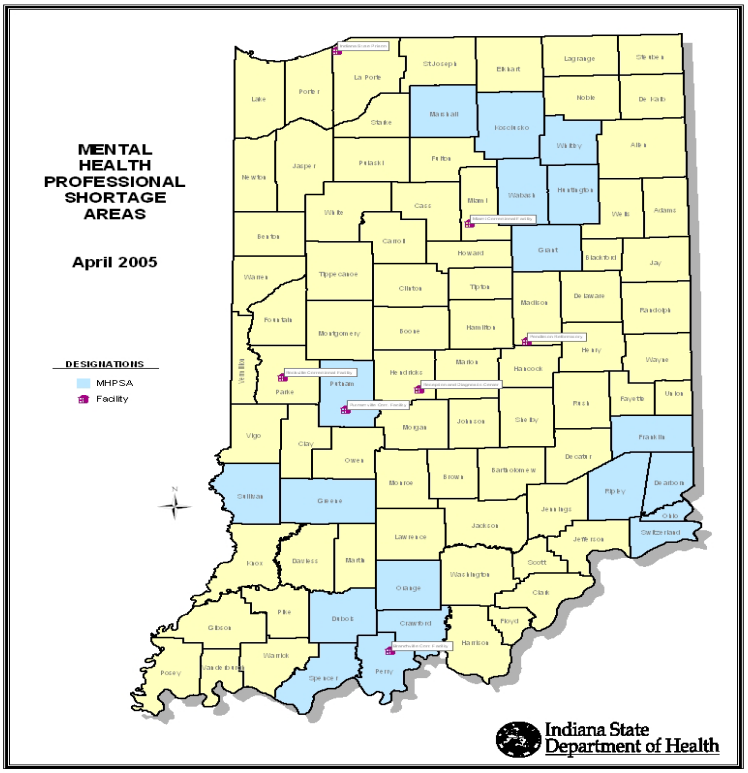
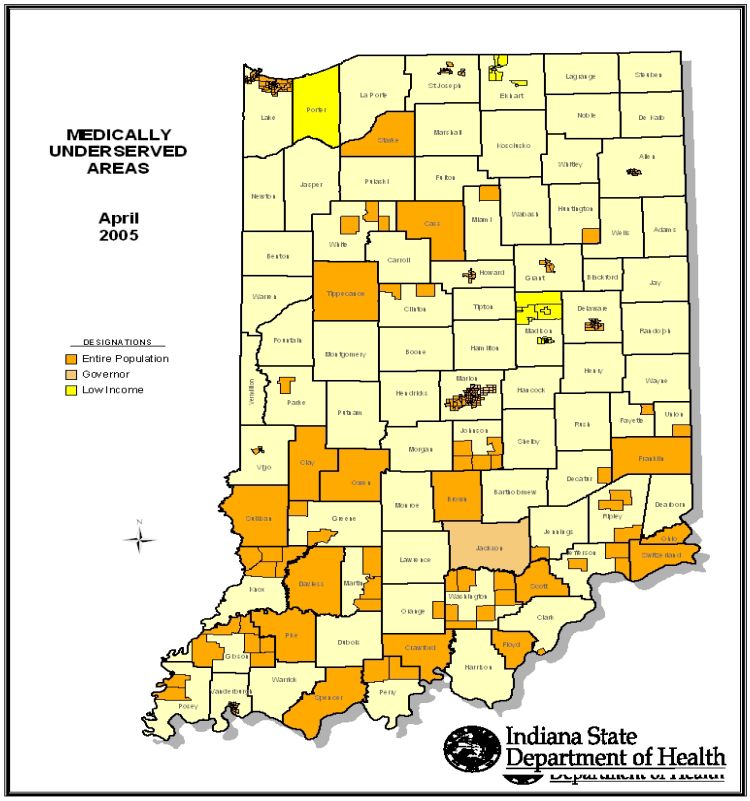



**Figure 70**



The Medically Underserved Area/Medically Underserved Population (MUA/MUP) designation is determined by a formula based on four factors: the percentage of the population below the poverty level, the average infant mortality rate for the previous five years, the percentage of the population over age 65 and the number of primary care physicians per 1,000 citizens. Currently, there are 50 counties in Indiana designated as MUA's in whole or part (see Fig. 71—note: Counties designated as "Governor" means the governor recommended the designation and the federal government approved them).

**Figure 71**




In the April 12, 2005 report of the Hoosier Healthwise Pediatric Provider Participation Report of the primary care providers with open panels and accepting Medicaid and SCHIP children by each county, 20 counties have provider panels that are >80% full. Eighteen of these counties are more rural and have <15 providers participating in the Hoosier Healthwise Program. Ten counties have < three providers in the county and five of those counties' providers are > 80% full. Nine counties' providers have panels that are ≥ 100% full.

2002 Data from the Indiana Health Care Professional Development Commission with Indiana State Department of Health (ISDH) provides the number of primary care physicians across Indiana. Using the ideal physician to population ratio of 1 to 3500, 11 counties have a shortage of primary care providers (See table 30). These counties need an additional 23 physicians to reach the ideal ratio. All these counties are either rural or partly rural. Across the state, Indiana has 3,313 more physicians than needed to match the

1:3500 ratio. Thus availability of primary care physicians should be understood as a problem of distribution in rural/partly rural counties.

**Table 30**

| Primary Care Physician Need | | | | | |
|---|---|---|---|---|---|
| County | HRSA Designated Rural Counties * | 2001 Population | Actual # Primary Care Physicians | Ideal Number Physician/ Population Ratio based on ideal of 1/3500 | Physician Surplus or (Shortage) |
| Indiana | | 6080485 | 3394 | 1737 | 1657 |
| Adams | PR | 33625 | 9 | 10 | -1 |
| Allen | | 331849 | 163 | 95 | 68 |
| Bartholomew | R | 71435 | 54 | 20 | 34 |
| Benton | R | 9421 | 3 | 3 | 0 |
| Blackford | R | 14048 | 10 | 4 | 6 |
| Boone | PR | 46107 | 39 | 13 | 26 |
| Brown | R | 14957 | 3 | 4 | -1 |
| Carroll | R | 20165 | 10 | 6 | 4 |
| Cass | R | 40930 | 17 | 12 | 5 |
| Clark | PR | 96472 | 59 | 28 | 31 |
| Clay | PR | 26556 | 10 | 8 | 2 |
| Clinton | PR | 33866 | 10 | 10 | 0 |
| Crawford | R | 10743 | 1 | 3 | -2 |
| Daviess | R | 29820 | 7 | 9 | -2 |
| Dearborn | PR | 46109 | 19 | 13 | 6 |
| Decatur | R | 24555 | 12 | 7 | 5 |
| Dekalb | PR | 40285 | 20 | 12 | 8 |
| Delaware | | 118769 | 77 | 34 | 43 |
| Dubois | R | 39674 | 24 | 11 | 13 |
| Elkhart | PR | 182791 | 96 | 52 | 44 |
| Fayette | R | 25588 | 11 | 7 | 4 |
| Floyd | | 70823 | 42 | 20 | 22 |
| Fountain | R | 17954 | 6 | 5 | 1 |
| Franklin | R | 22151 | 9 | 6 | 3 |
| Fulton | R | 20511 | 13 | 6 | 7 |
| Gibson | R | 32500 | 15 | 9 | 6 |
| Grant | R | 73403 | 42 | 21 | 21 |
| Greene | R | 33157 | 13 | 9 | 4 |
| Hamilton | | 182740 | 96 | 52 | 44 |
| Hancock | | 55391 | 24 | 16 | 8 |
| Harrison | PR | 34325 | 15 | 10 | 5 |

| County | HRSA Designated Rural Counties * | 2001 Population | Actual # Primary Care Physicians | Ideal Number Physician/ Population Ratio based on ideal of 1/3500 | Physician Surplus or (Shortage) |
|---|---|---|---|---|---|
| Hendricks | | 104093 | 45 | 30 | 15 |
| Henry | R | 48508 | 20 | 14 | 6 |
| Howard | PR | 84964 | 55 | 24 | 31 |
| Huntington | PR | 38075 | 16 | 11 | 5 |
| Jackson | R | 41335 | 18 | 12 | 6 |
| Jasper | R | 30043 | 17 | 9 | 8 |
| Jay | R | 21806 | 8 | 6 | 2 |
| Jefferson | R | 31705 | 19 | 9 | 10 |
| Jennings | R | 27554 | 15 | 8 | 7 |
| Johnson | PR | 115209 | 56 | 33 | 23 |
| Knox | R | 39256 | 24 | 11 | 13 |
| Kosciusko | R | 74057 | 36 | 21 | 15 |
| Lagrange | R | 34909 | 12 | 10 | 2 |
| Lake | | 484564 | 305 | 138 | 167 |
| La Porte | R | 110106 | 60 | 31 | 29 |
| Lawrence | R | 45922 | 23 | 13 | 10 |
| Madison | PR | 133358 | 70 | 38 | 32 |
| Marion | | 860454 | 654 | 246 | 408 |
| Marshall | R | 45128 | 27 | 13 | 14 |
| Martin | R | 10369 | 4 | 3 | 1 |
| Miami | R | 36082 | 12 | 10 | 2 |
| Monroe | PR | 120563 | 69 | 34 | 35 |
| Montgomery | R | 37629 | 21 | 11 | 10 |
| Morgan | PR | 66689 | 16 | 19 | -3 |
| Newton | R | 14566 | 1 | 4 | -3 |
| Noble | R | 46275 | 17 | 13 | 4 |
| Ohio | PR | 5623 | 4 | 2 | 2 |
| Orange | R | 19306 | 12 | 6 | 6 |
| Owen | R | 21786 | 1 | 6 | -5 |
| Parke | R | 17241 | 5 | 5 | 0 |
| Perry | R | 18899 | 7 | 5 | 2 |
| Pike | R | 12837 | 8 | 4 | 4 |
| Porter | PR | 146798 | 72 | 42 | 30 |
| Posey | PR | 27061 | 6 | 8 | -2 |
| Pulaski | R | 13755 | 6 | 4 | 2 |
| Putnam | R | 36019 | 15 | 10 | 5 |
| Randolph | R | 27401 | 9 | 8 | 1 |
| Ripley | R | 26523 | 16 | 8 | 8 |

| County | HRSA Designated Rural Counties * | 2001 Population | Actual # Primary Care Physicians | Ideal Number Physician/ Population Ratio based on ideal of 1/3500 | Physician Surplus or (Shortage) |
|---|---|---|---|---|---|
| Rush | R | 18261 | 11 | 5 | 6 |
| St. Joseph | PR | 265559 | 176 | 76 | 100 |
| Scott | PR | 22960 | 9 | 7 | 2 |
| Shelby | PR | 43445 | 18 | 12 | 6 |
| Spencer | R | 20391 | 4 | 6 | -2 |
| Starke | R | 23556 | 9 | 7 | 2 |
| Steuben | R | 33214 | 14 | 9 | 5 |
| Sullivan | R | 21751 | 13 | 6 | 7 |
| Switzerland | R | 9065 | 4 | 3 | 1 |
| Tippecanoe | | 148955 | 72 | 43 | 29 |
| Tipton | PR | 16577 | 5 | 5 | 0 |
| Union | R | 7349 | 4 | 2 | 2 |
| Vanderburgh | | 171922 | 141 | 49 | 92 |
| Vermillion | PR | 16788 | 4 | 5 | -1 |
| Vigo | PR | 105848 | 58 | 30 | 28 |
| Wabash | R | 34960 | 16 | 10 | 6 |
| Warren | R | 8419 | 3 | 2 | 1 |
| Warrick | PR | 52383 | 28 | 15 | 13 |
| Washington | R | 27223 | 8 | 8 | 0 |
| Wayne | R | 71097 | 44 | 20 | 24 |
| Wells | PR | 27600 | 23 | 8 | 15 |
| White | R | 25267 | 12 | 7 | 5 |
| Whitley | PR | 30707 | 8 | 9 | -1 |

**Note:** Surplus/shortage of physicians is based on an ideal ratio of 1 physician to 3,500 population.
* PR: Partly Rural; R: Rural
**Source:** [Table III-A(1)] Indiana Health Care Professional Development Commission, 2001 Annual Report.

MCSHC funds 42 direct primary care medical services clinics for prenatal, family planning, and child health clients and two direct care dental services. ISDH supports 39 (1 dental) community health center systems with 71 sites providing comprehensive primary care services in 29 counties. The CHCs served 292,360 citizens in 2004 and MCH primary care clinics served 8,820 prenatal, family planning and child health clients.

The Oral Health Program is a partner with Seal Indiana, a statewide mobile dental program directed by the Indiana University School of Dentistry (partially Title V funded), which provides preventive oral health services to children who do not have access to dental care. This program's objectives include promoting the use of sealants

throughout Indiana and decreasing the proportion of children with untreated dental disease.

The Indiana Family Helpline (IFHL) provides MCSHC a barometer for access to health care. In FY 2003-2004,15.5% of the callers requested help in finding general dentistry providers. This was a drop of 3% from the previous two years. Primary care provider requests were 4.9% of the calls, approximately the same as the previous two years.

According to the "Contraceptive Needs and Services, 2001 and 2002" report from the Alan Guttmacher Institute, 29.2% of the women under age 20 and 70.7% of women between 20-44 and under 250% FPL are in need of publicly supported contraceptive services and supplies. The report states there are 101 public family planning clinics available in the state; 49 are Title X funded; 5 are Title V funded. They served 147,260 clients in 2001 and 2002. Only 58 counties (64%) indicated in the 2004 county survey that family planning services were available in their county; 30 counties (33%) indicated such services were available in the next county.

Since the Friendly Access Prenatal Surveys done in Marion Co. indicated that approximately 75% of the new mothers wanted the pregnancy later or not at all and FY 2004 data from Indiana's Free Pregnancy Test Program indicates that 76% of the clients obtaining a free pregnancy test did not intend to become pregnant (but were concerned they might be), unintended pregnancy is an issue that the Friendly Access Program is addressing. However, location and financial availability to family planning services are not the only access barriers and may not be the primary ones. It is hoped that additional analysis of focus group data will bring other reasons why contraception is not utilized into focus, so that effective interventions can be made.

There are 129 general acute care hospitals, 23 psychiatric hospitals, 2 Veterans Administration hospitals and 14 acute long term care hospitals in the state of Indiana. Of the general acute care hospitals, 109 of them are birthing hospitals. There are 16 counties in which no hospital is located. There are 66 (50%) not-for-profit hospitals in the state, 38 government-base, and 27 proprietary hospitals. In the County Survey data, ten counties indicated that only a proprietary hospital was available. This may affect access for low income families.

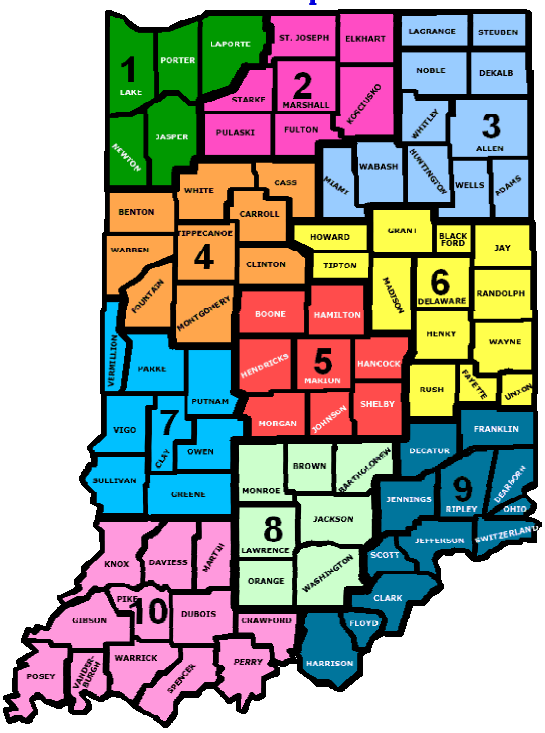
While Indiana has not officially designated primary, secondary and tertiary level hospitals for perinatal services, the Indiana Perinatal Network through hospital surveys has determined that there are 37 hospitals that could be designated as Level I for both obstetrics and newborn care; 27 hospitals could be Level II for both; and 5 hospitals in the state that could be Level III for both. However, 46 hospitals were designated as Level II for obstetrics alone with 6 hospitals qualifying as Level III for obstetrics, while 29 hospitals could be Level II for newborn care alone with 17 hospitals eligible for Level III designation for newborn care alone.

In order to distribute the federal and State funds for the bioterrorism preparedness activities, the State of Indiana Health Department with the State Emergency Management

Agency created ten Public Health Preparedness Districts. The geographic boundaries of those districts were based on the population, health care use patterns (i.e. hospital service areas), availability of emergency response resources, and economic and cultural ties. Figure 72 shows the list of counties in the 10 Public Health Preparedness Districts.

**Figure 72**

**Public HealthPreparedness Districts**




**Source:** Indiana State Department of Health.

Twenty-five percent of the hospitals are located in central Indiana Preparedness Region (Marion County and the surrounding contiguous counties). Another 12% of the hospitals are in each of the Preparedness Regions in the northeast and northwest corners and east central section of the state—the more populous parts of the state.

According to the Children and Youth with Special Health Care Needs Survey, 55.5% of Indiana's children with special health care needs (CSHCN) receive coordinated, ongoing, comprehensive care within a medical home (primary care) while only 5.2% indicated that they did not have a personal physician or nurse (better than the national average of 17.7%). Of the 10,112 special needs children enrolled in Indiana's Children's Special Health Care Services program, 84.6% have an identified primary care provider.

- Availability of Specialty Care Services When Needed—In the Children and Youth with Special Health Care Needs survey, 15% of respondents who needed specialty care had problems getting a referral (less than national average of 23.1%). Also, 22.8% of the families needed genetic and/or mental health services, and respite care service; and 12.4% of this population had one or more unmet special health care needs.

In FY 2003-2004, the Indiana Family Helpline requests for help in finding specialty health care services were 4.74% of the total calls received and requests for mental health services were 1.94% of the calls. (Total calls for that period of time were 54,706.)

There are 2,375 direct service specialty care physicians in Indiana that could serve the MCH population and that identified themselves as such in a survey done at the time of the 2001 licensing. Another 1,858 did not identify their specialty (see Table 31). This was a 33% increase over 1997. Most of them reside in urban areas.

**b. Enabling Services:** The ability of Indiana's citizenry to access health related enabling services is directly related to their ability to pay for those services, their cultural and ethnic comfort level with the providers, and the availability of health related enabling service providers in the state. The capacity of programs and services in Indiana to ensure access to health related enabling services (transportation, translation services, care coordination services, newborn screening follow-up and referral services, nutrition and health education, Free Pregnancy Test Program, Prenatal Substance Use Prevention Program) will be explored in this section.

- Financial Access— The purpose of the Children's Special Health Care Services (CSHCS--http://www.in.gov/isdh/programs/cshcs/index.htm) program is to provide high quality, comprehensive, family-centered diagnostic, treatment and rehabilitative services to Hoosier children with special health care needs who are financially and medically eligible for health care services as a result of chronic illness or disability. A family with an income no greater than 250% of the federal poverty level may be eligible for the program that covers primary and preventive medical services provided in a physician's office and office and hospitalization services for medical issues related to the eligible disease. The program utilizes all other sources of payment—including private insurance and/or Medicaid—before expending state dollars to pay for services.

  Age eligibility ranges from zero to twenty-one, with an exception for those diagnosed with cystic fibrosis, which carries lifetime eligibility. Medical eligibility is limited to a list of twenty-three covered conditions that are chronic in nature and that adversely affect a child's physical well-being. Among the approximately 9,500 children currently enrolled in the program, roughly 79% are white, 12% are black, 4% are Hispanic and 5% are from other minority backgrounds. Approximately 38% of those enrolled are eligible for Medicaid. According to the best data available, approximately 85% of enrolled children have some form of insurance or Medicaid coverage. This financial coverage is an enabling service in itself.

  However, in Indiana very few enabling services are covered by insurance, public or private. Hoosier Healthwise does reimburse for transportation to and from health care services, as does the Children's Special Health Care Services Program. Some individualized nutrition medical therapy counseling may be covered by some insurance companies, but Hoosier Healthwise covers only six group sessions per year. If there is a charge for these services then income/poverty levels play a part in determining access.

Generally, care coordination services are funded by an agency and, therefore, are free but only available to clients meeting certain criteria. Healthy Families Indiana, www.in.gov/fssa/families/protection/dfchealthy.html, a child abuse prevention program funded by the state with additional partners including MCSHC, Early Head Start, Division of Mental Health, hospitals, and Juvenile Justice Institute, provides family support and care coordination for up to five years to families who, when surveyed at the time of delivery or during the prenatal period, are at risk for child abuse. This program is free to those who qualify.

MCSHC sponsors 22 grantees that provide prenatal care coordination services to pregnant women. These are reimbursable by Medicaid for Medicaid clients ($240 maximum per client) and free to others who do not qualify for Medicaid. (This service costs more than the Medicaid reimbursement, so the agencies cover the difference.) Other health service providers like home health care agencies may offer this service, but usually limit it to Hoosier Healthwise recipients. Many times these services are a part of a larger prenatal clinic or community health center and are offered to all of the facility's clients free of charge whether they are Medicaid recipients or not.

Family care coordination for at-risk families is not reimbursable by Hoosier Healthwise in Indiana or by private insurance. This service, like prenatal care coordination, may be offered through grants from MCSHC, but these grantees serve only a small number of clients.

Children with special health care needs in the 0-3 age category may receive service coordination and developmental therapies through Indiana's First Steps Program, www.state.in.us/fssa/first_step/index.html, for children with developmental delays. This program is available to families of any income level with a child 0-3 years of age with a developmental delay. Service coordination, evaluation and assessment and development of the Individualized Family Service Plan (IFSP) are provided free of charge. As of April 2003, families with incomes above 350% of the FPL are charged a co-payment for treatment services, with a cap of five co-pays/month. The amount of the co-pay increases with every 100% increase in FPL income and a new law increases the amount of co-pay for families with higher incomes. This program is currently being reviewed. A new law lowers the income level at which the co-pay begins to 250% FPL. It is anticipated that there will be more changes to continue to curtail costs while still providing the needed service.

The First Steps program served 19,309 clients in 2004. In 2003 about 45% of the enrolled families had private health insurance and 46-48% had Medicaid. In 2004, 78.5% were white, 10% were African American, 5.4% Hispanic, 4.5% multiracial, and 1.3% Asian/Pacific Islander.

Older CSHCN may obtain some care coordination through the school systems. Currently there is no local/direct care coordination associated with the Title V CSHCS program. Transitions services both at age 3years (from First Steps Early Intervention to school-based services) and at age 18 (from CSHCS program to adult health care) are minimal

and not well coordinated. MCSHC does sponsor one pilot grant in Marion Co. that is examining transitional care in order to develop a program model for transitional care of CSHCN that can be shared with families and physicians.

MCSHC's Prenatal Substance Use Prevention Program (PSUPP), funded by Indiana Division of Mental Health and Addiction, the Indiana Tobacco Prevention Cessation Agency, and Maternal and Children's Special Health Care Services, provides education and support, free of charge, for pregnant women who are trying to decrease use of alcohol, tobacco, or other drugs during pregnancy. This service occurs within a clinic site, but can provide home visitation. In 2004, 3,561 pregnant women were served in this program.

MCSHC provides the population-based Free Pregnancy Test Program that provides minimal care coordination services. Free pregnancy tests are provided to agencies who serve women of childbearing age. The agency staff facilitates women in taking the pregnancy test and counsels and refers them to health care services, education services, WIC, Hoosier Healthwise and other services, as appropriate. In FY 2004, 17,282 pregnancy tests were provided to about 13,547 unduplicated clients. This program was restarted in 2003 and is still growing.

Another population-based enabling service offered by MCSHC is the Indiana Family Helpline (IFHL). IFHL is a call center that provides information and referral to anyone who calls with a medical or social service need through an "800" number (1-800-433-0746). In FY 2004, the IFHL served 28,117 callers; about 37% of the callers received referral contacts for their health, dental, and mental health needs; another 23% received referral contacts for Medicaid, transportation and financial assistance.

The IFHL participates in the IN 211 Partnership, Inc., a network of information and referral call centers and statewide organizations that are collaborating to provide information and referral information to the citizens of Indiana by simply dialing 2-1-1. Ten call centers are now functioning as IN 211 call centers serving 52% of Indiana's population. Several other call centers are upgrading to meet the requirements of an IN 211 call center. Last year the first six IN 211 call centers took 110,000 calls. According to the largest of those call centers (67,000 calls), 8% of the calls were for health or mental health needs. If the IFHL is needed as a call center, it will provide services to those counties that are not covered, so that the whole state will have this service.

IFHL is also used by CSHCS program to provide to their clients' referrals to health, dental, mental health and other social service providers. IFHL also provide language assistance to CSHCS clients.

- Cultural Acceptability—See "Cultural Acceptability" section in Direct Services. All enabling services funded by Title V through ISDH are required to send at least one staff to attend cultural diversity training at ISDH or another approved offering annually.

The Universal Newborn Hearing Screening/Early Hearing Detection and Intervention Program is developing culturally acceptable infrastructure through training of specialized First Steps Service Coordinators to work with families whose infants have not passed the newborn hearing screen. Also, through this program professional audiologists are being given extra training to diagnose and treat infants who did not pass hearing screening. According to the county surveys, 53 (59%) counties have translation services available (5 counties did not respond). Cultural diversity training is available in 25 (28%) of the counties (7 counties did not respond). Minority or cultural associations were indicated in 28 (31%) of the counties.

- Availability of Services—CSHCS program strives to have community-based providers wherever possible for its enrollees and has at least one provider of some kind that the program reimburses in 85 of 92 counties. Of those eighty-five counties, 72 have at least one primary care provider (most have more than one), 62 have at least one dental provider, and only 28 have a medical specialist of some kind. Three counties have providers that do not provide direct medical service. Most of these special needs children obtain their specialty care services at Riley Hospital in Indianapolis, or with specialists in the larger Indiana cities or urban areas out of state. But even primary care and dental care services need to be obtained from a county outside the county of residence by many of the children with special needs.

  Healthy Families provides services in every county from 56 sites through state funding. But according to the county surveys, in 14 (16%) counties it is underfunded and there is a waiting list (13 counties did not respond). In FY 2003, 15,111 assessments were done on pregnant women (of approximately 85,000 births) and 14,378 families received home visiting services.

  First Steps is available in every county and to all income levels, though costs to clients will be increasing. In SFY 2004, 19,457 children were served by First Steps with Marion, Lake, and Hamilton Counties serving the most children. Service Coordination was provided for 17,908 families and was the most frequently reimbursed service provided.

  The Prenatal Care Coordination (PNCC) Program strives to develop and coordinate access to holistic, community-based health care services for pregnant women and their families at risk for poor pregnancy outcomes due to physical, social, psychological, financial, or environmental factors. The primary goal of Prenatal Care Coordination is early entrance into prenatal care and continued participation throughout the pregnancy and postpartum period to reduce low birth weight, preterm labor, and infant mortality.

  The goal is accomplished through an outreach and home visiting program by certified professionals and paraprofessionals to Medicaid eligible women who are at risk for poor pregnancy outcomes. Providers eligible to provide prenatal care coordination include; registered nurses, certified social workers, registered dietitians, physicians, and community health workers.

A 1999 review of prenatal care coordination outcome forms shows that PNCC is making an impact in: reduction in smoking during pregnancy; increased number of women keeping prenatal appointments; increased number of infants with a primary medical provider; increased number of infants with appropriate well child care, including immunizations; increased number of women obtaining a postpartum exam.
Services delivered by State Certified Prenatal Care Coordinators and Community Health Workers include:

- outreach to service and medical providers, the community, and families, to engage pregnant women in health promoting behaviors, including early entrance into prenatal care;
- development of collaborative relationships with appropriate health team members so that service planning and education is effective in addressing all identified needs;
- assessment of patient and family for physical, social, psychological, financial, or environmental risk factors;
- development of an individualized care plan to address needs;
- education on topics impacting pregnancy outcome and infant care, to reduce risks and promote adoption of healthy behaviors, and adherence to medical provider's recommendations;
- initiation and follow-up of referral to appropriate, available community services, i.e., health insurance, WIC, food, clothing, housing, transportation, education/GED completion, child care, and other needed services; and
- ongoing evaluation of care plan to evaluate effectiveness and additional needs.

Family care coordination is a proven intervention which strives to facilitate a seamless delivery of services for mother and children through outreach, assessment, care planning, advocacy, referral, education and counseling on health behavior risk reduction during both clinic and home visits with the family. Goals are to improve utilization of EPSDT services, immunization service, primary care providers, and to empower families with education and support to access health, education, and social services they need.

MCSHC has 28 grantees offering prenatal care coordination in 22 counties and 11 family care coordination grantees in 10 counties. These programs served 3,227 pregnant women and children in 2004.

In the county survey data, prenatal care coordination services were indicated to be available in 57 (63%) of the counties. It was offered by the hospitals in 44 counties.

In the county survey (with 7 counties not responding), only 18 counties have county-wide bus service and 26 surveys indicated the county had city/town bus service available. Forty-six county surveys indicated there was taxi service available. However, 79 (88%) of the surveys indicated that there was transportation available for Medicaid clients.

There were 8 county surveys that indicated there were no ambulance services available to them; 40 counties have one; 19 have two; and 23 have three or more services available (2

counties did not respond). Eleven counties have at least one Pediatric EMS and an EMS equipped to transport high risk prenatal clients before delivery.

The county survey addressed substance abuse cessation support services available. Fifteen (17%) surveys indicated they had no outpatient substance abuse treatment services; 38 (42%) counties have one; 18 (20%) have 2; 18 (20%) have 3 or more. There are 67 counties with substance abuse treatment programs for children and adolescents and 64 counties with programs for pregnant women. However, in-patient programs for children/adolescents were only indicated in 20 (22%) county surveys and only 25 county surveys indicated any in-patient substance abuse treatment available. In 42 counties with more than one treatment center, the centers were in the same city/town; in 16 counties with more than one, they were located in different cities/towns.

Since smoking is a big health issue in Indiana, smoking cessation services availability was also a part of the county survey. The surveys indicated that there were no smoking cessation support services in 24 counties; 36 counties have one service; 21 counties have 2 services; and 9 counties have 3 or more (range 0-10) services. Less available are smoking cessation support services for children and teens: 45 county surveys indicated there were none; 33 have one; and 11 counties have 2 or more services (range 0-9).

MCSHC has 14 PSUPP projects that serve 22 counties in Indiana. In FY 2004, 4,361 pregnant women were screened and 3,561 participated in the educational and support services. This program expands as funding permits.

The Hemophilia Program is a two part enabling program. First, it pays premiums for a state insurance program through the Indiana Comprehensive Health Insurance Association (ICHIA) for children and adults diagnosed with hemophilia or von Willebrand disease. As applicable, premiums are paid by CSHCS or Chronic Disease. To be eligible for the program: (1) must currently reside in Indiana and plan to continue to reside in Indiana, (2) is not eligible for Medicaid, (3) is not eligible for Medicare, (4) has been diagnosed with hemophilia or von Willebrand disease (severe or severely moderate), (5) does not have any form of health insurance coverage or has been rejected for insurance or the application was accepted, but the premium was higher than the premium under ICHIA, (6) has a total income equal to or less than liabilities, including cost of factor, and (7) has total liquid assets of $10,000 or less. There are currently 16 adults and 9 children enrolled in the Hemophilia Program.

The second part includes a grant provided to the Indiana Hemophilia and Thrombosis Center, Inc. (IHTC). One is the Amish Outreach Program for Amish persons with bleeding disorders in the state of Indiana. There are carriers of hemophilia who require services, with some carriers yet to be identified. With the identification of large Amish kindred at risk for having von Willebrand disease, the Amish outreach program has expanded to provide services for patients with this disorder. The IHTC employs a Mennonite nurse trained in hemophilia who lives in close proximity to the Amish population in northern Indiana and is familiar with the Amish culture. The nurse provides nursing assessments, infusion services, home infusion training, hemophilia education,

and monitoring of treatment products. Other components of the program include an outreach clinic and a genetic services/carrier registry.

As part of the NBS program, infants that screen positively for Sickle Cell and other hemoglobinapathies are referred to NBS Sickle Cell Projects. The program was implemented in 1985 through Public Law 28, Section 10. The program continues to facilitate various entities in order to provide appropriate and adequate testing, follow up and counseling, and treatment for newborns found to have Sickle Cell or another Hemoglobin disorder. The birthing institution in which the baby is born is responsible for making sure that initial NBS heel stick test is completed. The report is then sent to the IU Newborn Laboratory, where the tests are completed and notifications regarding the results are issued to the birth hospital, the pediatrician, the appropriate Sickle Cell Care Center, and the ISDH NBS staff responsible for the management of this Program.

The Indiana Sickle Cell program receives data for follow-up and necessary treatments (i.e. penicillin) from the IU lab. Four of the Centers provide information on medical follow up (repeat blood tests, penicillin) as well as education, care coordination and decision making counseling to the parents and help to increase community awareness of sickle cell and its effect on individuals, families and the community. The fifth center provides only sickle cell education to professional providers.

Another responsibility of the Sickle Cell Program is to manage the distribution of penicillin. This prophylactic medication is provided to sickle cell patients in Indiana on a no cost basis, upon receipt of a prescription order from their physician. The distribution of this medication has been granted out to one of the Sickle Cell Care Centers.

The ISDH's IFHL, a comprehensive multi-lingual human services helpline, is available to all citizens of Indiana, Monday through Friday from 7:30 AM to 5 PM. Voicemail is available when the staff is assisting callers, after hours, weekends and agency holidays. Requests left on voicemail receive a return call within 24 hours of return to work.

The IN 211 Partnerships call centers provide coverage to about 52% of the population through service provided in 39 counties. IN 211 is phasing in 24/7 service coverage and coverage for the remainder of the state as funding becomes available and caller centers become endorsed. The goal of the IN 211 Partnership, Inc. is to provide an improved, uniformly professional health and social service information and referral system throughout the state.

Extent of Financial Barriers to Primary, Specialty, Habilitation and Rehabilitation Services for both Direct and Enabling Services—While the percent of poverty in Indiana in 2002 was lower than the national average (9.6% vs. 12.1%), the trend was rising. However, Indiana seems to have a lower uninsured percentage of the population than is found nationally and a larger percent than nationally that is insured by an employer. In addition, 46 (50%) counties have 12.4% (the state average) of the population or more enrolled in the Medicaid program in June 2003 (range 3.5% to 18.5% of the county population).

With regard to the MCH population group of pregnant women, infants, and women of childbearing age, women between the ages of 18-29 were least likely to be insured and least likely to have employment-based health insurance (March of Dimes [MOD] Peristats 2001-2003 website, 2004). The MOD reports that 16.7% of the women of childbearing age were uninsured. ISDH MCSHC grantee data for family planning services indicates that 77% of the clients have no means to pay or would self pay (sliding fee scale) at the time of enrollment. The Friendly Access surveys indicate that nearly 72% of the women interviewed did not intend to become pregnant. Yet 63.5 % were on Medicaid or had other insurance, but 71% were not using birth control. Thus, a financial barrier was not the only barrier to accessing family planning services and other primary health care services to women 18-29 years of age may be limited due to lack of insurance.

In the same survey (done in Marion Co.), 90.5% of the respondents had insurance coverage for most or all of their prenatal care and 75.9% had coverage for delivery. However, only 5.4% indicated they had trouble paying for their prenatal care and 4.8% indicated they had trouble paying for their delivery. ISDH MCSHC grantee data indicates that 51% of the clients had no means to pay or were to self pay at the time of enrollment. Many of these clients would be eligible for Hoosier Healthwise for Pregnant Women and the MCSHC clinic and prenatal care coordination staff facilitates their getting into care. Hoosier Healthwise for Prenatal Women covers all primary/preventive, specialty/sub-specialty care, habilitation and rehabilitation services that are related to the pregnancy (for example, Hoosier Healthwise will reimburse an obstetrician or perinatologist, if needed, and will reimburse for dental services, with prior approval, if the need for dental services is related to the pregnancy.

In 2003 and 2004, an estimated 50.3% and 50.6% of the births, respectively, were to mothers receiving Hoosier Healthwise (Medicaid). Medicaid currently covers women who were Medicaid recipients for their pregnancy for sixty days post partum. During that time a method of birth control can be obtained, but if there is a monthly cost, it may not be maintained. However, Senate Enrolled Act 572 directs the Office of Medicaid Policy and Planning (OMPP) to request a waiver from HHS to reimburse for family planning services (save abortions and methods that prevent fertilized eggs from implanting) for two years post partum for a recipient of Medicaid for pregnant women. Since about 50% of Indiana's births are to women receiving Medicaid, this should improve the ability to space pregnancies.

Non-citizens who meet all financial and categorical requirements for Hoosier Healthwise can be eligible for either full coverage or coverage limited to emergencies, depending on immigration status. Women who have coverage limited to emergencies and labor and delivery will deliver infants that are full citizens and eligible for full Hoosier Healthwise.

For the enabling service of prenatal care coordination, from the MCSHC grantee data, 62% of the clients were Medicaid recipients upon enrollment and, thus, the grantee was partially reimbursed for those services; up to 38% had no way to pay, were self pay, or had other insurance that did not pay for care coordination at the time of enrollment. Some of these may have been eligible for Medicaid, but the project would not otherwise be paid for those services.

Infants born to mothers covered by Medicaid are automatically eligible for Hoosier Healthwise for the first year of life. All primary/preventive care and specialty/sub-specialty care, habilitation and rehabilitative care services are currently covered, subject to prior authorization. Hospitals frequently facilitate for infants born in their facility to receive Hoosier Healthwise. Other infants that would be eligible for Hoosier Healthwise would be those whose family incomes fall between 150% and 200% FPL. These infants would be eligible for the premium payment program in Hoosier Healthwise. Barriers to obtaining Hoosier Healthwise for all eligible infants would be completion of the paperwork as well as inability to pay the premium costs.

According to the MOD Peristats data, during 2001-2003, 10.2% of the children under 19 years of age were uninsured. The American Academy of Pediatrics Research Analysis Report of March 2004 indicates that 33.8% of Indiana's children under the age of 19 were eligible for Medicaid/SCHIP in Indiana, but only 61% of the eligible children were enrolled. The MCSHC child health grantee data indicates that 51% of the children had Hoosier Healthwise at enrollment while 22% had no insurance or would self-pay at enrollment. Many of these clients would be assisted in applying for Hoosier Healthwise once enrolled in the project.

In the Pediatric Friendly Access Survey done in public health clinics in Marion County (Indianapolis), only 0.4% of the respondents indicated that their children had not had Medicaid coverage at all during the year; 90% had Medicaid coverage all year; and 4.7% indicated that they had trouble paying for their child's health care. Since this survey was done in the largest metropolitan area of the state, it is biased to population already in the health care system in an urban setting with racial distribution skewed toward minorities (40% African American, 9.4% Hispanic or multiracial). The Hispanic respondents were significantly more likely to report difficulty with transportation to the provider's office (36%) than non-Hispanics (11%) and significantly fewer Hispanic respondents (33% Hispanic vs. 55% non-Hispanic) reported having access to help with transportation through their child's provider (bus tokens are frequently provided).

First Steps provides habilitative and rehabilitative services to families with children under 3 years with developmental delays. The primary services for which First Steps reimburses include (in order of use) speech therapy, developmental therapy, physical therapy, occupational therapy, audiology, assistive technology, and nutrition. Service coordination is provided to 91% of the enrollees. With legislatively mandated increases in First Steps families that will need to provide co-payment for services as well as the amount of co-pay for the families, the habilitative and rehabilitative services utilized by families with children with special health care needs may be compromised. These changes will not begin before July 1, 2005 as rules need to be developed to reflect the law.

Because of the state budget deficit, curtailing the costs of Medicaid continues to be a focus. There may be eligibility changes, reimbursement level changes, changes in services that are reimbursable. By November 2005, all Medicaid recipients will be Managed Care Organization (MCO) clients. Each MCO will pay for services rendered with their own protocols and procedures. Continued efforts should be made to enroll the additional 39% of eligible Indiana children into the program.

Children's Special Health Care Services (http://www.in.gov/isdh/programs/cshcs/overview.htm) (CSHCS is part of MCSHC) provides reimbursement coverage for primary care and specialty care for the eligible diagnosis/es, as well as hospitalization and rehabilitation for health issues related to the diagnosis/es. This program pays at the Medicaid rates and is considered the payer of last resort. All applicants must apply for Hoosier Healthwise as part of the application for CSHCS. However, the families are not required to accept the SCHIP part of Hoosier Healthwise in which a premium is paid by the recipient family at this time. Income eligibility for CSHCS is up to 250% FPL, however, a recipient must also be eligible by diagnosis for this program.

The national Children and Youth with Special Health Care Needs survey, indicated that Indiana was below the national average in CSHCN that were uninsured (4.8% vs. 5.2%) and in CSHCN that had inadequate insurance coverage (31.2% vs. 33.8%). One in four families indicated they had financial problems due to their child's health needs. Twelve percent of the respondents spent more than $1000 on the child's special health care needs per year. Thus, financial issues continue to be an issue for many families of children with special health care needs.

Genetics services are not reimbursed by all insurances and can be very expensive. However, genetic evaluation and counseling could ultimately decrease the number of children with special needs, by educating families about their chances of having additional children with special health care needs and giving families choices. Reimbursing for genetics services could save money in the long run through prevention.

The Impact Of Emerging Issues On The State's Ability To Provide Direct And Enabling Services:

*Oral Health Services:* While access to oral health care to low income families is critical in Indiana, it is not an emerging issue. In the mid 1990's, Medicaid cut reimbursement levels to dentists. Many dentists refused to be Medicaid providers (some provided services to low income clients but would not bill Medicaid). An oral health provider crisis occurred. With the help of ISDH's Oral Health Director, OMPP increased the reimbursement of the dentists for their service to one of the highest in the region. Even with this concession, dentists have been slow to return as Medicaid providers although the number of dentists available to Medicaid recipients has increased. The IFHL continues to receive the most calls for dental health services, but they are usually able to provide the callers with acceptable referrals.

*Post Partum Depression:* The Indiana Perinatal Network (IPN) co-hosted, with ISDH and several central Indiana hospital systems, the Indiana Perinatal Depression Summit in April 2005. This provided a training opportunity for nurses, physicians and other health care providers to learn to identify perinatal mood disorders, to know pharmacological treatments and to be aware of resources for treatment of such disorders. IPN and IU School of Nursing received a HRSA grant to focus on Post Partum Depression and will continue to address this issue statewide and work in collaboration with other groups interested in this issue.

*Childhood (and adult) Obesity:* Childhood obesity (and adult obesity) is an emergent issue in Indiana. In the last two years, ISDH has had a physician on loan from Eli Lilly, Inc., assisting staff in identifying and determining a plan to address obesity. Part of the plan to address obesity in Indiana is to create a website with evidence-based resource links and data. Several grants have

been provided to local communities specifically to address childhood obesity and to begin collecting data. The Department of Education is working with ISDH to begin to collect BMIs of school aged children. ISDH developed a BMI software package that can plot individual BMIs of children. MCSHC has obesity as a priority and is developing a state priority measure to ensure continued efforts at addressing this issue through our grantees providing direct and enabling services.

*Domestic violence (particularly child abuse):* Domestic violence and related child abuse prevention has been identified as a priority due to recent deaths of children in Indiana. Intentional injury (homicide and suicide) among teens is also an issue. MCSHC is currently providing training to MCH grantees and other clinic staff on methods to identify domestic violence situations, methods to intervene, and resources available to them for referral. Child fatality reviews are now functioning in every county in Indiana through a law directing the Family and Social Service Administration to establish them. It is anticipated that the FIMR reviews will merge with the child fatality reviews. The new governor has made a new Department of Child Services in the State which should provide greater emphasis and direction on children in need of services. Riley Hospital through a HRSA grant opened the first child safety store within the hospital. The store provides at minimal cost child safety items. MCSHC will continue to participate in collaborative efforts to improve intentional injury statistics in Indiana.

*Unintended Pregnancy:* Through the Friendly Access Survey and the Free Pregnancy Test Program data, unintended pregnancy is an issue for all races and ethnicities that continues to stand out as a problem. Related to that, the majority of respondents did not use birth control before they were pregnant. Because of this, Indiana Access/IPN in association with MCSHC has chosen to focus its efforts on what access issues lead to unintended pregnancies and to determine what interventions may impact this issue. This will be in collaboration with other groups with similar interests who participate on the Indiana Access Board.

*Infant Mortality:* While high infant mortality rates, particularly minority infant mortality rates, are not an emerging issue in Indiana, that these rates have not had greater improvement is leading MCSHC to analyze the issues further using Fetal and Infant Mortality Reviews in conjunction with Perinatal Periods of Risk (PPOR) methodology. In addition, the focus groups and Prenatal Friendly Access surveys have included questions about perinatal stressors on the mothers and/or families. Once this information has been analyzed, the most appropriate evidence-based interventions will be implemented in the continued effort to impact infant mortality.

Availability of Care: One source of data regarding health care providers is the Indiana Health Professions Bureau (HPB). However, HPB does not contain information on *active*, licensed or certified Indiana health care providers who elected Indiana as principal practice of location. Therefore, in 2001 the ISDH in collaboration with the HPB implemented the inclusion of a survey with licensure renewal for several providers beginning with physicians and nurses. Although the providers were not required to return the surveys, 91.8% of the physicians who renewed their licenses and 93.6% of the nurses who renewed their licenses did return their surveys. Because more recent surveys was available only electronically (not included in the mail out information) and the return of the surveys is not mandatory, survey completion of those who renewed their licenses was lower. Therefore, for this capacity assessment we have chosen to use

the 2001 survey information (even though these figures do not represent 100% of the health care providers) primarily along with the HPB information to reflect the capacity.

According to the data provided by Indiana Health Professions Bureau, Indiana currently has 24,031 licensed physicians, 22,423 of whom are medical doctors (MD), and 1608 of whom are osteopathic physicians (DO). Using these total figures, the statewide population to physician ratio is 259 people to 1 physician (based on a 2004 population estimate of 6,237,569). According to the 2001 Indiana Physician survey, there were 9,984 active physicians with an Indiana license and an Indiana principal practice location. This is 25% increase from the year 1997 (n= 7,962).

The number of active female physicians increased from 17.4% in 1997 to 20.9 % in 2001 while the number of active male physicians decreased from 82.6% in 1997 to 79.1% in 2001. (There were 251 physicians in the 2001 survey whose gender information was missing.) Although male physicians comprise the majority of physicians in all aggregated specialty groups, significantly higher proportion of active female physicians practice in primary care than male physicians (44.7% vs. 31.8%). Other specialties in which female physicians tend to practice in greater proportions include internal medicine/pediatrics (1.1%), OB/GYN (8.5%), pediatric subspecialties (3.6%), psychiatry (3.8%), pathology (2.7%), and geriatrics (0.6%).

Although the white population predominates the profession, a noticeable ethnic and racial diversity in Indiana physicians was observed (see Table 31). In 2001, 79.8% (n= 7,693) of Indiana physicians were white, compared to 82.2% (n=6,496) in 1997. African American physicians comprised of 3.7% (n= 355) of Indiana physicians when compared to 2.9% (n = 231) in 1997, over a 50% increase. The Asian/Pacific islander physicians grew from 12.2 % (n = 965) in 1997 to 12.3% (n=1,187), while the proportion of American Indian/Native Alaskan physicians remained the same. According to the survey data, the number of physicians of Hispanic origin grew from 2.3% (n=266) to 2.5% (n=232) between 1997 and 2001.

Approximately 45.4% of physician respondents statewide reported that children under 18 years of age are a significant part of their practice and approximately 74.2 % of physician respondents statewide reported that elderly of ages 65 and over are a significant part of their practice.

**Table 31**

| **Physicians by Race, 1999 and 2001; Indiana** | | | | |
|---|---|---|---|---|
| Race | 2,001 | % | 1,997 | % |
| White | 7,693 | 79.8 | 6,496 | 82.2 |
| Black/Af.Am. | 355 | 3.7 | 231 | 2.9 |
| Asian/Pac.Is. | 1,187 | 12.3 | 965 | 12.2 |
| Am.Ind/Nat.Al. | 6 | 0.1 | 5 | 0.1 |
| Multi-Racial | 47 | 0.5 | NA | NA |
| Other | 352 | 3.7 | 209 | 2.6 |
| Total | 9640 | 100 | 7906 | 100 |
| **Source:** Indiana Physician Survey, 2001; Indiana State Department of Health | | | | |

Overall, Indiana specialty physician numbers have grown by about 25% between 1997 and 2001. The survey indicates the growth has been significantly greater in some specialties (See Table 32). More physicians are choosing primary care specialties. Between 1997 and 2001, the

primary care physicians in Indiana increased from 32.9% (n = 2603) to 34.3% (n= 3394), a 30.4% increase.

**Table 32**

| Physicians by Aggregated Specialty Group, 2001 and 1997; Indiana | | | | | |
|---|---|---|---|---|---|
| **Aggregated Specialty Group** | **2001** | **%Column** | **1997** | **%Column** | **Percent Increase/Decrease in 2001** |
| Total | 9,896 | 100 | 7,910 | 100 | 25.1 |
| Primary Care | 3,394 | 34.3 | 2,603 | 32.9 | 30.4 |
| Emergency Medicine | 529 | 5.3 | 423 | 5.3 | 25.1 |
| Geriatrics | 38 | 0.4 | 25 | 0.3 | 52 |
| Internal Medicine Subspecialty | 1,048 | 10.6 | 843 | 10.7 | 24.3 |
| Internal Medicine/Pediatrics | 70 | 0.7 | 31 | 0.4 | 125.8 |
| OB/GYN | 510 | 5.2 | 436 | 5.5 | 17 |
| Pathology (Gen. And Subspecialty) | 232 | 2.3 | 222 | 2.8 | 4.5 |
| Pediatrics Subspecialties | 181 | 1.8 | 114 | 1.4 | 58.8 |
| Psychiatry | 468 | 4.7 | 398 | 5 | 17.6 |
| Radiology (Gen and Subspecialty) | 493 | 5 | 364 | 4.6 | 35.4 |
| Surgery (Gen and Subspecialty) | 1,075 | 10.9 | 796 | 10.1 | 35.1 |
| Other | 1,858 | 18.8 | 1,655 | 20.9 | 12.3 |
| **Source:** Indiana Physician Survey, 2001; Indiana State Department of Health | | | | | |

Black/African American physicians and multiracial physicians have a significantly higher proportion of physicians in primary care, 42.2% and 40.4% respectively. (Nationally, the primary care physician percentage was 32.8%.).

Data from the Indiana Physician Survey provides some prospective on the ratio of the primary care physicians to the population. Overall population to primary care physician ratios in Indiana has improved between 1997 and 2001 for both urban and rural populations (See Table 33) and remain lower than the ratio required for HPSA designation.

**Table 33**

| Population to Primary Care Physician Ratio, 2001 and 1997; Indiana | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Number** | **% of Total** | **State Ratio** | **IN Urban Ratio** | **IN Rural Ratio** | **Federal Urban Ratio** | **Federal Rural Ratio** | **HPSA Ratio** |
| 2001 Primary Care Physicians | 3,394 | 34.3 | 1,792:1 | 1,720:1 | 2,338:1 | 1,696:1 | 2,100:1 | 3,500:1 |
| 1997 Primary Care Physicians | 2,603 | 32.9 | 2,244:1 | 2,153:1 | 2,852:1 | 2,115:1 | 2,654:1 | 3,500:1 |

**Source:** Indiana Physician Survey, 2001; Indiana State Department of Health
**Notes:**
Primary Care = Family Practice, general practice, general internal medicine and general pediatrics.
HPSA (Health Professional Shortage Areas) is designated to areas having Population-to-physician ratio equal to or lesser than 3500:1.

Physicians who are in various specialties in Indiana are classified by rural and urban in Table 34. Data was collected from the 2001 survey. No matter which definition of rural is used (state or federal), urban counties have a large number of physicians when compared to the rural counties.

**Table 34**

| Physicians by Major Specialty and Urban or Rural Principal Practice Location, 2001; Indiana | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Specialty** | **IN Urban Counties** | | **IN Rural Counties** | | | **Federal Urban Counties** | | **Federal Rural Counties** | |
| | **Number** | **%** | **Number** | **%** | **Total** | **Number** | **%** | **Number** | **%** |
| Total | 9298 | 94 | 598 | 6 | 9896 | 8238 | 83.2 | 1658 | 16.8 |
| Allergy and Immunology | 47 | 100 | 0 | 0 | 47 | 46 | 97.9 | 1 | 2.1 |
| Anesthesiology | 645 | 98.3 | 11 | 1.7 | 656 | 585 | 89.2 | 71 | 10.8 |
| Cardiology | 366 | 98.4 | 6 | 1.6 | 372 | 336 | 90.3 | 36 | 9.7 |
| Critical Care Medicine | 29 | 96.7 | 1 | 3.3 | 30 | 29 | 96.7 | 1 | 3.3 |
| Emergency Medicine | 477 | 90.2 | 52 | 9.8 | 529 | 399 | 75.4 | 130 | 24.6 |
| Endocrinology | 79 | 98.8 | 1 | 3.3 | 30 | 29 | 96.7 | 1 | 3.3 |
| Family or General Practice | 1667 | 84.9 | 297 | 15.1 | 1964 | 1434 | 73 | 530 | 27 |
| Geriatrics | 38 | 100 | 0 | 0 | 38 | 36 | 94.7 | 2 | 5.3 |
| Internal | 850 | 92.2 | 72 | 7.8 | 922 | 734 | 79.6 | 188 | 20.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Medicine/General | | | | | | | | | |
| Pathology (general) | 178 | 97.3 | 5 | 2.7 | 183 | 148 | 80.9 | 35 | 19.1 |
| Pediatrics (General) | 483 | 95.1 | 25 | 4.9 | 508 | 421 | 82.9 | 87 | 17.1 |
| Psychiatry | 452 | 97.2 | 13 | 2.8 | 465 | 390 | 83.9 | 75 | 16.1 |
| Radiology | 339 | 95.8 | 15 | 4.2 | 354 | 287 | 81.1 | 67 | 18.9 |
| Surgery, General | 294 | 92.2 | 25 | 7.8 | 319 | 234 | 73.4 | 85 | 26.6 |
| Urology | 143 | 97.9 | 3 | 2.1 | 146 | 125 | 85.6 | 21 | 14.4 |
| Other | 820 | 98.2 | 15 | 1.8 | 835 | 750 | 89.8 | 85 | 10.2 |
| **Source:** Indiana Physician Survey 2001; Indiana State Department of Health. | | | | | | | | | |

Health Professions Bureau indicates that as of May 5, 2005 there are 78,070 Registered Nurses; 24,736 Licensed Practical Nurses; 1,685 Nurse Practitioners; 140 Clinical Nurse Specialists; and 81 Certified Nurse Midwives. However, because there is more information to analyze from the 2001 Indiana Registered Nurse Survey and 93.6% of the nurses who renewed their licenses returned the survey, the figures from that survey will be used.

2001 Indiana Registered Nurse Survey data indicate that there were 72,928 registered nurses with current Indiana license. Of these 52,807 (72.4 percent) had a usable principal position zip code in Indiana for an RN to population ratio of 1:115 or 868 per 100,000. Of the 52,807 nurses, 45,615 were actively working in nursing profession. Overall, the number of RNs actively practicing in Indiana grew from 38,721 in 1997 to 45,615 in 2001, and increase of about 18 percent.

The racial composition of Indiana RNs changed between 1997 and 2001. The number of black/African American RNs grew from 1,011 in 1997 to 1,344 in 2001, an increase of almost 33 percent. While the overall RN workforce proportion of Asian/Pacific Islander RNs stayed the same between 1997 and 2001 (1 percent). The American Indiana/Native Alaskan proportion of the RN workforce grew by a little over 7 percent (from 68 in 1997 to 73 in 2001). The number of RNs of Hispanic origin grew by almost 33 percent between 1997 and 2001, from 418 (1.1 percent of the RN workforce) to 555 (1.3 percent of the RN workforce).

Advance Practice Nurses (APNs) in all categories have grown markedly since 1997. There were 1,188 APNs in 2001 in Indiana, compared to 426 APNs in 1997. The 2001 statewide APN-to-population ratio is 1:5118 or 19.53 per 100,000. Clinical Nurse Specialists (CNSs) have also increased by over 150 percent, from 34 in 1997 to 86 in 2001. Nurse Practitioners (NPs) have increased by 183 percent, from 374 in 1997 to 1,060 in 2001; and Certified Nurse Midwives (CNMs) have increased by 133 percent, from 18 in 1997 to 42 in 2001.

Below is data from the Health Professions Bureau. Table 35 highlights the license/certification type and count for the Indiana Health Care Professionals. There are currently 1,442 Registered Dieticians (RD) in Indiana, but only 975 have become Certified. There is no requirement for RDs to be certified to work. Because nutrition is the basis for both prevention and treatment of chronic disease, the dearth of RDs as Indiana's population ages may become even more of a crisis than it is now.

**Table 35**

| License Type | Count of License Type as of May,05,2005 |
|---|---|
| Physician | 24,031 |
| Osteopathic Physician | 1,608 |
| Physical Therapist | 4,523 |
| Nurse Midwife | 70 |
| Physicians Assistant | 479 |
| Dentist | 3,499 |
| Dental Hygienist | 3,826 |
| Optometrist | 1,347 |
| Psychologist | 1,507 |
| Speech Pathologist | 1,812 |
| Audiologist | 362 |
| License Practical Nurse | 24,736 |
| Registered Nurse | 78,070 |
| Respiratory Care Practitioner | 3,814 |
| Occupational Therapist | 2,278 |
| Social Worker | 2,215 |
| Clinical Social Worker | 3,487 |
| Certified Dietician | 975 |
| Clinical Nurse Specialist | 140 |
| Nurse Practitioner | 1,685 |
| Certified Nurse Midwife | 81 |
| **Source:** Data request from Indiana Health Professions Bureau, May, 05, 2005. | |

In July 2003, a report, Workforce Gaps in Indiana's Health Industries, was published. It was prepared by Thomas P. Miller and Associates and the Hudson Institute for the Indiana Health Industry Forum. This report reviewed the supply and demand aspects of health care providers in Indiana from 2003-2008. Based on Table 36 and Table 37, the conclusions reached are that Indiana's higher education system does not produce enough workers to meet the demand over the stated five year period for registered nurses, respiratory therapists, physical therapists, and probably, to a lesser degree, occupational therapists and radiology technicians. The report also indicated that licensing data indicates that on average each year, Indiana awards more licenses than degrees for the listed occupations, indicating that Indiana draws from sources other than state schools for health care service providers and that these other sources may not provide enough providers during the five year period.

**Table 36**

| **Indiana Supply and Demand Estimates in Selected Occupations in Healthcare Delivery 2003-2008 (based on degrees awarded)** | | | |
|---|---|---|---|
| **Occupation** | **Indiana Labor Pool Needed for Healthcare Delivery 2003-2008** | **Indiana Degrees Awarded per Year** | **Estimated Degrees to be Awarded 2003-2008** |
| Registered Nurse | 11,604 | 1,018 (Associate's)<br>814 (Bachelor's) | 9,160 |
| Respiratory Therapist | 1,380 | 16 (Certificate)<br>80 (Associate's)<br>16 (Bachelor's) | 560 |
| Physical Therapist | 844 | 86 (Bachelor's) | 430 |
| Occupational Therapist | 426 | 82 (Bachelor's) | 410 |
| **Source:** Hudson Institute JOWE @ database; U.S. Census Bureau; Indiana Commission for Higher Education | | | |

**Table 37**

| **Indiana Supply and Demand Estimates in Selected Occupations in Healthcare Delivery 2003-2008 (based on new licenses awarded)** | | | |
|---|---|---|---|
| **Occupation** | **Indiana Labor Pool Needed for Healthcare Delivery 2002-2008** | **Indiana new Licenses warded per Year** | **Estimated Licenses to be Awarded 2003-2008** |
| Registered Nurse | 11,604 | 2,169 | 10,845 |
| Respiratory Therapist | 1,380 | 139 | 695 |
| Physical Therapist | 844 | 206 | 1,030 |
| Occupational Therapist | 426 | 152 | 760 |
| **Source:** Hudson Institute, JOWE@database; U.S. Census Bureau; Indiana Health professions Bureau. | | | |

The Hoosier Healthwise Pediatric Provider Participation Report (see direct service provider availability section above) indicates, by county, the percentage of enrolled clients per number in the provider panel. As panels inch closer to 100%, concern is raised as to whether participants in Hoosier Healthwise will be provided services locally. Data on the number of Hoosier Healthwise providers indicate that there are an adequate number of providers, but they are concentrated in certain counties. Between 1999 and 2005, the number of pediatric providers increased by 25.5% and the number of slots were increased by 15.28%.

Linkages That Exist To Promote Provision Of Service And Referrals Between Primary Level, Specialized Secondary Level, And Highly Specialized Tertiary Level Care: Most referral

networks and linkages are facilitated through hospital systems networks, managed care organizations, and insurance carriers. No longer are referrals to second or third levels of care done on a collegial basis entirely.

In Indiana, Riley Children's Hospital, located at the Indiana University Medical Center in Marion County, continues to be the primary tertiary pediatric facility. However, a second Children's Hospital at St. Vincent's Hospital in Marion County is now in competition with Riley. Other hospitals may have a children's focus for secondary care, but they are not currently identified.

Riley Hospital has a pediatric outpatient facility where CSHCN can receive specialty care and multidisciplinary care. It draws clients statewide and so is not considered community-based.

The CSHCS program does assure that each enrolled client has a community-based primary care provider and, if possible, a specialty care provider. Although this program used to provide multidisciplinary specialty clinics regionally around the state in major urban areas, the sponsorship of these programs was discontinued about a decade ago to focus on a more community-based service.

However, both St. Joseph Regional Medical Center and Memorial Hospital in South Bend, Indiana continued to sponsor some of these clinics. St. Joseph Regional Medical Center provides Pediatric Specialty Clinics (supported through local contributions) for Rheumatology, Gastroenterology, Endocrine, Diabetic, and Cardiology which are staffed by Riley Hospital physicians and Cystic Fibrosis, Myelomenigocele, and Newborn follow-up with their own staff. Memorial Health Systems sponsors Pediatric Clinics for Developmental Delays and Hemotology/Oncology in partnership with Riley and Newborn follow-up and Autism (in August, 2005) with their own staff.

The seven Title V and Newborn Screening (metabolic) supported Genetics Service providers in Indiana have set up outreach clinic sites around the state. There are 14 sites around the state (five in the north; five in the south; and four, including Riley, in the central part of the state) at which genetic services are available from weekly to quarterly. In addition, there are 3 prenatal and 1 pediatric genetic service providers in Indianapolis. These specialty services are not as closely linked to MCOs or hospital networks, so marketing of Genetic Services is a major part of the Indiana Genetics Services Plan.

Indiana Title V Collaboration With Others In The State Who Address Inadequate, Or Poorly Distributed, Health Care Resources: MCSHC has worked closely in the state with the Office of Medicaid Policy and Planning (OMPP) to increase pediatric providers in Hoosier Healthwise. The Oral Health Division has worked with the Indiana Dental Association and OMPP to facilitate an agreement to re-enroll dental providers around the state. MCSHC works very closely with both the Lake County and the Marion County Healthy Start Projects in Indiana to improve service providers in those geographic areas.

MCSHC maintains communication with the Indiana Primary Health Care Association (IPHCA) and the community health centers (CHCs) around the state by supporting (through grants) the

enabling services like prenatal care coordination that CHC would not offer otherwise. Moreover, many of the current CHCs began as MCH projects and have expanded to serve all age groups.

MCSHC collaborates closely with the Indiana Family Health Council (IFHC), the Title X agency, to augment family planning services in the state. IFHC provides monitoring and technical assistance to the MCSHC family planning sites to maintain consistent quality. MCSHC maintains contact with the Indiana Rural Health Association and the Indiana Public Health Association through ISDH staff and contractors working as liaisons to these groups. These groups help to identify possible HPSA and MUA communities for primary and dental health care and assist them in gathering the data to apply for designation.

Within ISDH, Policy and Grants Resource Center act as liaison to the Indiana University Medical School and its Department of Public Health to increase the numbers of public health providers. ISDH staff has participated in the Indiana Area Health Education Centers (AHEC) telemedicine efforts and other staff facilitate the J-1 visa program to provide medical personnel in the HPSA and MUA and collaborate with the Indiana University Medical School in a loan repayment program for health professionals. IU Medical School also has scholarships for students who want to practice primary care in rural areas and for minority students. MCSHCS Medical Director supervises 6-10 medical students per year in a month long public health/preventive medicine elective.

**c. Population-Based Services:** MCSHC sponsors or directly manages several population-based programs that impact all MCH populations and participates collaboratively with population-based initiatives with other divisions of ISDH as well as other agencies. The following describes these programs.

- Genomics in Public Health/Newborn Screening (NBS) Program includes the population-based services of the newborn metabolic (heel stick) screens, the universal newborn hearing screening (UNHS) and other programs related to tracking to ensure children get the appropriate care. The NBS program is funded through a NBS fee collected for each birth; UNHS also has grant funds from HRSA and CDC; and state funds and occasionally Title V funds support some of the programs in this Section.

  Indiana Code 16-41-17 requires that the ISDH maintain a centralized Newborn Screening Program (NBS) that provides diagnoses, follow-up, management, family counseling, and support, including equipment, supplies, formula and other materials for all infants identified as having one of the designated disorders. Out of 87,100 births in 2003, more than 99% of newborns received initial screens. Follow-up was conducted on 100% of newborns receiving abnormal and invalid screens. Follow-up was conducted on 100% of infants with positive test results, and 119 confirmed positives received treatment and follow-up. Infants with positive test results were referred to the Genomics in Public Health program, Sickle Cell, First Steps, and CSHCS programs.

  Through the NBS program, a blood test (by heel-stick) is done on all infants shortly after birth to test for certain genetic disorders. Indiana is currently screening for up to 39 disorders. In order for a screen to be valid, the specimen must be collected at least 48

hours after birth and 24 hours after the first protein feed. The only acceptable justification for a valid screen not being performed is a religious objection by the parents.

Follow-up is done to obtain repeat screens on all abnormal and unsatisfactory screens. It is critical to immediately locate physicians and parents when a repeat screen is required. If the responsible birthing center or physician is unable to obtain the repeat screen, additional follow-up is initiated by Indiana University Medical Center Newborn Screening Laboratory (IU NBS Lab). IU NBS Lab is the laboratory elected through competitive bidding by the Indiana State Department (ISDH) for processing specimens. If further follow-up is needed, the Newborn Screening Section of ISDH requests assistance from the area Public Health Nurse and local health officials.

Infants confirmed to have one of the designated genetic disorders are referred to the Biochemical Geneticist or the Endocrinologist at the Indiana University Medical Center. The ISDH NBS Section works collaboratively with IU NBS Lab, Sickle Cell Program, and the Genomics in Public Health Program to ensure follow-up and treatment for all infants diagnosed as having one of the designated disorders.

The mission of Newborn Drug Screening Program is to identify drug afflicted infants and collect information on the incidence of drug abuse during pregnancy. While this program does not screen all newborns for drugs, all newborns are subject to the screen if the criteria is met.

In 1997, the Indiana General Assembly passed PL 260-1997 (now 224-2003) requiring a screening test for possible drug affliction in newborns. In accordance with this law, hospitals and physicians are required to submit a meconium specimen for every infant who meets the selection criteria of weight less than 2500 grams, a head circumference smaller than the tenth percentile for the infant's gestational age, and no other medical explanation for the aforementioned conditions. Also, if any two of the following conditions exist: a maternal history of current or past drug use within the previous two years; an unexpected abruption placenta; mother has no or inconsistent prenatal care.

The meconium is tested for the drug classes of Amphetamines (Amphetamine & Methamphetamine), Cannabinoids (Marijuana), Cocaine (and Cocaine Metabolites), Opiates (Morphine, Codeine, Hydrocodone, Oxycodone or OxyCotin).

The Universal Newborn Hearing Screening (UNHS) Program was created through a state mandated law, effective July 2000 which requires that all infants born or residing in Indiana, be screened for possible hearing impairments. An important aspect of this program is that those found with hearing impairments receive early intervention and adequate follow up services. Currently the UNHS Program is administered under the Genomics and Newborn Screening (NBS) Program in Maternal and Children's Special Health Care Services (CSHCS) in Indiana State Department of Health (ISDH). This program coordinates with Indiana First Steps Early Intervention Services, hospitals, providers, and other agencies to provide statewide implementation of UNHS.

The primary goal of UNHS is that all infants be screened for possible hearing loss, by one month of age (preferably prior to discharge from hospital), and if they do not pass the screening, receive audiological evaluations by three months of age and are enrolled in an appropriate intervention program by six months of age. This is accomplished by collecting and maintaining comprehensive monthly data from each of the 109 birthing facilities throughout the state of Indiana and following up on infants not screened as required, by sending out letters to parents and primary care provider as a reminder that infants are required to be screened. Hospitals are to refer children who do not pass the hearing screen to First Steps for further diagnosis and early intervention services and to audiologists for further diagnosis.

Educating the public, including parents and primary care physicians of the importance of early detection of hearing loss and early intervention for babies who do not pass is a major part of this program. The NBS program staff works in conjunction with the Indiana School for the Deaf to promote awareness and parent participation in the program.

The Genomics Program at the Indiana State Department of Health strives to increase the awareness and understanding of genetic conditions and to ensure that all infants born in Indiana each year with birth defects or genetic conditions have access to genetic services. The goals of the program are to: (1) educate the public and health care providers about available services, genetic disorders and birth defects, and advancements in the field of genomics, (2) educated families of children with genetic conditions or birth defects, and (3) assure families receive equal access to services regardless of socioeconomic status and help meet the unique health care needs of affected children.

The Genomics Program received a 4-year MCHB grant in September 2002 to implement Indiana's State Genetics Plan, which includes facilitation of Indiana's Genetic Advisory Committee, enhancement of the Indiana Birth Defects and Problems Registry (IBDPR), and implementation of a statewide Folic Acid Campaign.

The statewide Folic Acid Campaign began in January 2004 with planning occurring in 2003 in collaboration with the Indiana Folic Acid Council funded by the March of Dimes. The Indiana Folic Acid Council sponsored two conferences (2004 and 2005) geared toward professionals that was telecast to sites statewide. The Folic Acid Campaign was kicked off at the initial conference. Through the campaign efforts, a curriculum for science teachers in both middle and high schools has been developed. A website has been developed with all materials that have been developed as well as resources. Brochures have been developed that have been disseminated at conferences and health fairs. Vitamins are to be distributed at WIC and other public clinics.

The goals of the Genomics Program are accomplished with the assistance of genetics clinics around the state. The Maternal and Child Health (MCH) Block Grant partially supports seven regional genetics centers, some of which sponsor additional outreach clinics.

- The MCSHC Adolescent Health Program facilitates the Indiana RESPECT (Indiana Reduces Early Sex and Pregnancy by Educating Children and Teens) initiative. The Adolescent Health Coordinator uses State Adolescent Pregnancy Prevention funds ($597,787/year for FY 04 & 05) and Federal Sexual Abstinence Education Block Grant funds (770,198/year for FY 04 & 05) to fund three components: (1) Community Grant Program, (2) Statewide Media Campaign, and (3) Technical Assistance/Training.

  The Community Grant Program solicited proposals for the distinct State and Federal funding programs. For FY 04-05, 26 federally funded grantees are providing programs that stress sexual abstinence until marriage. For FY 04-05, 29 state-funded grantees are providing adolescent pregnancy prevention programs that stress sexual abstinence throughout the teen years. Grantees provide these programs in a variety of youth-serving organizations including schools, community organizations, and congregations. In SFY 2004, 17,057 unduplicated clients (62,623 encounters) participated in programs of the State grantees. In FY 2004, 100,842 unduplicated clients (267,150 encounters) participated in programs of the Federal grantees.

  A new Statewide Media Campaign will be implemented in 2005. The new campaign will include statewide teen and parent media flights (TV, radio, billboards, print ads, etc.) scheduled for the summer of 2005. Free broadcast-quality copies of the new media materials will be provided to local communities for local campaign initiatives and local media scheduling. Awareness and recall of the media campaign will be assessed by telephone surveys completed with Indiana teens and parents after each broadcast flight of the TV and radio spots.

- The Maternal Child Health Services Perinatal Health Program has the primary responsibility for promoting and improving the health of our state's women, children and families, with special attention given to those of low income or with limited availability of health services, to prevent maternal and infant deaths and other adverse perinatal outcomes, to eliminate health barriers and disparities, assure early entry into quality prenatal care, and improve infrastructure and perinatal systems of care. In collaboration with local health departments, hospitals, private providers, professional organizations and community groups the program works to assure adequate, equal, and accessible services for all pregnant women and their infants.

  As a part of this program MCSHC sponsors the Indiana Perinatal Network, Inc. (IPN) (http://www.indianaperinatal.org) and the Perinatal Consultant works with this staff on both the population-based and infrastructure building levels of the Pyramid.
  The Infant Health and Survival Program (formerly called the SIDS Program) is housed in IPN. This program has developed educational information for both consumers and providers that are found on the website along with information about support groups and other resources and are also distributed at presentations. First responders are trained on how to respond to an infant death. Information like Safe Sleeping Brochures, Back to Sleep (baby sleeping on the back) and reminders, like door hangers, with safe sleeping hints are available on the web.

**Baby First—Right From the Start** is a population-based media campaign, created and facilitated through IPN, that distributes information to pregnant women that will assist in having a healthy pregnancy and a healthy baby. Baby First billboards have been present around the state, radio announcements, and Baby First Packets (including a video) are sent to every pregnant caller to the Indiana Family Helpline (IFHL) who would like one. Packets are also given to some professionals to distributed. All educational materials from preterm labor symptoms to post partum depression resources are on the website for consumers and professionals to provide their patients.

In May 2002, the Office of Minority Health (OMH) hosted its first series of **"Shower Your Baby with Love, Baby Showers"** in Evansville, Gary, Indianapolis, and South Bend. More than 2200 expectant parents attended the events, which have become an annual tradition. Medically underserved pregnant women, their partners and family members receive information on accessing prenatal care, healthy pregnancies, infant safety, and child development. Materials on community resources and successful parenting are also provided to participants along with typical baby shower items. In 2004, seven baby showers were held around the state, including one for the Hispanic community in Lafayette.

The OMH partners with the Indiana Perinatal Association and the Maternal & Child Health Network of Lake County to promote the **"Baby First . . . Right from the Start"** campaign in Gary. The goal of the campaign is to reduce rates of infant mortality and low birth weight among high risk minority women who do not have access to prenatal care services.

In order to assist local communities in meeting the challenges related to the growing Hispanic/Latino population, the OMH partners with the Indiana Primary Health Care Association (IPHCA) to host "Bridging the Gap," a Basic Training for Medical Interpreters. The 40-hour course trains local health providers to serve as bilingual interpreters in health care settings. The OMH is also coordinating the translation of Indiana's public health information into Spanish.

The Indiana Division of HIV/STD continues to partner with the OMH for the **"Get Tested for HIV"** campaign. This event is modeled after the National Get Tested Campaign sponsored by the National Association for People with AIDS (NAPWA). On June 27th of each year, Hoosiers are encouraged to "take the test and take control" by determining their HIV status. One of the targeted populations is prenatal women.

MCSHC, IPN and WIC Breastfeeding Subcommittees have developed a state plan which includes a population-based breastfeeding campaign which will begin in the fall of 2006. These groups have been coordinating efforts for many years.

IPN also publishes an educational newsletter that is mailed out to health care providers and can be obtained on the website. Provider protocols and consensus papers on perinatal health topics are available on the website (www.indianaperinatal.org).

- The Free Pregnancy Test Program, a population-based program that provides enabling education and services to the targeted population, works in combination with both the perinatal and adolescent health programs other existing programs initiated by ISDH to reduce the State's high Infant Mortality Rate (IMR), increase the low percent of women beginning prenatal care in the first trimester of pregnancy, improve access to primary, prenatal and family planning care, and encourage women to complete their education. The ISDH Free Pregnancy Test Program targets women of child-bearing age, women without high school diplomas, and those with low-incomes.

  The program provides free Pregnancy Test Kits and sets of "control" solution to participating agencies that outreach to women of childbearing age. These agencies offer services and referrals to the target population whether they are pregnant or not, and provide ISDH/MCSHC data on clients who are tested. There are one hundred and two(102) agencies located in sixty-two (62) counties enrolled in the program. These agencies included, twenty-six (26) local health departments; twenty-one (21) WIC Clinics; nine (9) family planning clinics; the rest were Community Health Centers, and other not-for-profit agencies.

- ISDH's statewide, comprehensive, bilingual, health and human service helpline, the Indiana Family Helpline (1-800-433-0746) is also a population-based program that provides enabling services to any caller who calls the toll free number. It is available Monday through Friday from 7:30 AM to 5 PM with voicemail available after hours, weekends and holidays. Trained communication specialists provide information, referrals, consumer education, advocacy and follow-up to callers on a variety of topics including, but not limited to, early prenatal and child health care, Medicaid, WIC, food pantries, shelters, utility assistance, library, vocational and GED programs.

  The Helpline's mission is carried out in collaboration with local communities, other state agencies, organizations and individuals concerned with the health and well being of Indiana families. During FY 2004, IFHL responded to 28,117 calls.

- The Indiana Childhood Lead Poisoning Prevention Program (ICLPPP) is a program that spans the pyramid levels. Lead screens are available to all at risk children at local health departments, WIC clinics, and other public clinics in high risk areas. ISDH supplies the test kits to the agencies. Lead test samples are analyzed at no cost to the provider. Local Health Department personnel are trained and provide environmental risk assessments to families of children with high lead levels (enabling level). The remainder of ICLPPP is infrastructure building.

- The Indiana State Department of Health Immunization Program is 100% federally funded through the grant process and CDC/National Immunization Program (NIP) branch. The program participates in the Vaccines for Children (VFC) and Fund 317 programs. The VFC program for private providers is contractually awarded. The current contractor is the Delaware County Health Department. They employ two supervisors, field investigators, Hepatitis B case managers, Health Educators, and clerical staff to process vaccine orders, shipping, inventory for public and private providers. A staff

epidemiologist is also on staff to perform statistical analyses of immunization rates, trends, and other duties as assigned.

The program has awarded a contract with General Injectables Vaccines, Inc (GIV) to receive and ship all vaccines allotted to Indiana's program.
The immunization program hosts the annual "Fall Awards" conferences. During these conferences there are educational sessions presented by nationally renowned people. Also, the program conducts an awards ceremony. Providers who achieve an immunization rate of 90% to 94.9% are presented with a certificate. Providers who achieve an immunization rate of 95% to 100% are presented with a plaque. These immunization rates are determined by the field staff using the CDC's software applications of CASA/AFIX. There are also special awards presented; these categories vary from year-to-year.

The immunization program has established links with numerous partners and stakeholders across Indiana. These include the Indiana Immunization Coalition, WIC, Lead data through the Regenstrief Institute, Vital Records, school corporations (public & private), Medicaid & Medicaid HMOs, private insurance providers for HEDIS reporting. All MCH funded clinics that provide immunization participate in this program and a staff consultant sits on the advisory committee.

- Indiana's Oral Health Program, supported by Title V, focuses on education and prevention with special emphasis on fluoridation. Oral Health staff provide technical assistance to communities and schools with fluoridated water supplies and conduct over 1,500 site visits annually. (Indiana currently has 96% of the population served by over 700 municipal water systems receiving optimally fluoridated water.) Annually, a sealant use survey of a statistical sample of third grade school classes is completed during Oral Health Month. As part of this survey educational materials on oral health and dental sealants are distributed to the teachers whose classes agree to complete the survey. Thus, this survey provides data for infrastructure planning but also the opportunity to distribute population-based education.

- Indiana's Injury Prevention Program (started in 2002) at ISDH has an infrastructure building focus. However, the collaborating partners may have population-based education initiatives. In conjunction with the Injury Prevention Program, MCHSCS facilitated the statewide (10 sites) training of health and other professionals in identifying and assisting or finding resources for women in domestic violence situations in 2005. The Injury Program is developing an Injury Prevention Resource Director which will be available on a web page.

- The Indiana Tobacco Prevention Use and Cessation Board (http://www.in.gov/itpc/) was created through the funds generated by the Master Settlement Agreement between 46 state Attorneys General and the tobacco industry, and by legislation enacted by the Second Regular Session 111th General Assembly. The Indiana Tobacco Prevention and Cessation Agency is responsible for developing programs to prevent and reduce the usage of tobacco and tobacco products in Indiana by utilizing best practices for tobacco control

programs developed by the federal Centers for Disease Control and Prevention. Through their efforts fewer teens are smoking (a teen survey is compiled biennially), more Indiana cities and towns are smoke free in public places (including Indianapolis in March 2006) and air monitoring indicates the air quality is improving.

**d. Infrastructure Building**—Indiana's Title V state staff must function (please see Needs Assessment Collaboration Survey Summary in Part 2, p. 8) at the infrastructure building level in order to promote improvement in any of the 18 National Performance Measures or state performance measures, because there are too few public health providers at the state and local levels. MCSHC supports through both funding and staffing many infrastructure building initiatives for all MCH populations. The following is an assessment of the existing systems and mechanisms currently in place through the facilitation of or in partnership with ISDH or MCSHC by population groups.

- *Preventive and primary care services for pregnant women, mothers and infants*: The MCSHC Perinatal Health Program (perinatal is traditionally defined as the period of time during the pregnancy, birth and the first month after birth but has grown to include the preconception period to age one, with the recognition that health status prior to pregnancy also influences maternal and newborn outcomes) has the primary responsibility for promoting and improving the health of our state's women, children and families, with special attention given to those of low income or with limited availability of health services, to prevent maternal and infant deaths and other adverse perinatal outcomes, to eliminate health barriers and disparities, assure early entry into quality prenatal care, and improve infrastructure and perinatal systems of care. In collaboration with local health departments, hospitals, private providers, professional organizations and community groups the program works to assure adequate, equal, and accessible services for all pregnant women and their infants.

  The program works to improve the perinatal care system through policy development, Title V funding of local programs in high-risk communities, provision of technical assistance, consultation, and support on a statewide basis to professionals, paraprofessionals, and other local program staff to ensure quality and availability of services. This program falls under the maternal health programs of the Title V MCH Block Grant.

  Other activities of the Perinatal Health Program:
  - Collect, analyze and disseminate perinatal outcomes to communities to ensure that the planning and delivery of perinatal heath care services meet the needs of the population.
  - Support appropriate care services to improve access to seamless and effective services.
  - Work with communities to build capacity and provide health services that meet local needs and address inequalities.
  - Build stronger and more effective partnerships with consumers, internal and external stakeholders.

- Mobilize community partnerships in identifying and solving community health problems.
- Develop policies and plans that support individual and community efforts to improve health.

The Perinatal Health Program staff works in collaboration with the Indiana Perinatal Network, Inc. to present provider update news alerts, consensus statements, health professional education on up-to-date topics, and a quarterly perinatal newsletter. Membership in the Indiana Perinatal Network is active and on-going, and open to all community based organizations. Members of the Indiana Perinatal Network commit to participating in or supporting IPN activities, including attending IPN sponsored conferences, distributing materials, promoting the IPN mission or serving on a workgroup. IPN provides networking opportunities for those involved in perinatal care through its Indiana Friendly Access efforts, its State Perinatal Advisory Board and Regional Perinatal Advisory Boards, its issues committees, the Indiana Perinatal Health Planning Group, and the Speaker's Bureau. The IPN provides one of MCSHC links to Indiana ACOG and AAP chapters.

The Infant Mortality Initiative is carried out in collaboration with the Indiana Perinatal Network and its Infant Health and Survival Program, Indiana Friendly Access Program, the IPN Very Low Birth Weight Subcommittee, and the State Perinatal Advisory Board (SPAB is the advisory and consensus-building group for the Indiana Perinatal Network. SPAB members represent all constituencies concerned with perinatal issues including ACOG, APP, nurse midwives, consumers and payers and from all geographic regions of the state).

As a part of the AMCHP Elimination of Perinatal Disparities Learning Lab, staff will take an integrative approach to examine the biological, behavioral, psychological and social determinants of perinatal health through focus groups, town meetings, Mini-PRAMS surveys, and collaboration with IPN's Indiana Friendly Access focused in five counties. A birth cohort was compiled for the state using 2002 data. Some of the targeted counties will conduct a Perinatal Periods of Risk data assessment using their county birth cohort data. This group will critically re-evaluate current principles, programs and policies in our perinatal health systems at the community level. Each target county will develop a strategic plan to eliminate disparities in perinatal care. In addition, MCSHC will continue to fund Fetal and Infant Mortality Reviews (FIMR) in the targeted counties with IPN providing technical assistance and will work in collaboration with the Department of Child Services on Child Fatality Reviews in every county.

An Infant Mortality and Prematurity Health Priority Implementation Plan has been developed as part of the ISDH State Health Performance Plan. MCSHC is working in conjunction with WIC, the Office of Minority Health, PSUPP, and IPN to impact breastfeeding, adequacy of prenatal care, delivery of high risk infants in appropriate level-of-care hospitals, obesity, smoking, and disparity. WIC and MCSHC have worked together in the area of breastfeeding promotion for many years. The WIC breastfeeding coordinator is the point person for breastfeeding within ISDH and the WIC Breastfeeding

Committee and the IPN Breastfeeding Subcommittee have developed a State Breastfeeding Plan which includes a population-based and provider based education promotion plus training Breastfeeding Consultants.

IPN has identified Post Partum Depression as a focus in improving outcomes. They co-sponsored the conference, the Indiana Perinatal Depression Summit, funded in part by MCSHC and by a HRSA grant, that was a "kick off" event for a year's focus on the topic. IPN will update the consensus statement on post partum depression and guidelines for provider assessment of this depression. These will be disseminated to family practitioners, obstetricians, and pediatricians.

The ISDH Perinatal Consultant will facilitate the IPN's Infant Health and Survival Program and ISDH's Vital Statistics Services in working with coroners to improve the completion of the death certificate data. This should improve the accuracy of the death certificate data for better planning.

IPN has also compiled a self assessment survey of hospital services to determine the level of care for delivery and newborn care that each hospital provides based on the National ACOG guidelines. This will be published in June, 2005.
MCSHC contracts with the Indiana Family Health Council to monitor and provide technical assistance to the Title V funded family planning clinics. This is a quality assurance contract.

- *Preventive and primary care services for children:* Several infrastructure building planning grants have been received at ISDH and MCSHC that focus on children since the last needs assessment. The following information reflect this growing capacity.

  The Early Childhood Comprehensive Systems (ECCS) Grant Program is funded by the Maternal and Child Health Bureau for two years beginning July 2003. The goal of the project is to develop a strategic plan to support a coordinated system of services for young children from birth up to age six in Indiana. Toward that goal, a Core Partners group was convened which included members from key stakeholders such as the Department of Health, the Family and Social Services Administration, the Department of Education, the Department of Corrections, the Indiana Department of Environmental Management, the Indiana Parent Information Network, the Indiana Association for the Education of Young Children, the Indiana Head Start Association, and Riley Hospital for Children Child Development Center. and parents. The group has met regularly and provided input on the ECCS Program's vision, service standards, desired outcomes, and issue identification. Additionally, five subcommittees were formed and met to address the project's five focus areas, which include: access to health insurance and a primary medical provider; mental health and socio-emotional development; early care and education; parent education; and family support. These smaller work groups identified unmet needs in each of the areas and brainstormed ways to solve problems.

  The statewide Community Forum Meetings were held in August and September 2004 in six different locations throughout the state. Two meetings were scheduled at each

location at different times to ensure the broadest range of attendees possible. The goal of the meetings was to hear input from anyone who hadn't voiced their concerns, experiences, and opinions previously. The meetings were for anyone with an interest in meeting the needs of young children and their families in Indiana. This included parents, caregivers, child care workers, health professionals, etc. The forums focused discussion on how people feel about services for families in their communities. Community Forum Meetings were held in Ft. Wayne, Jeffersonville, Evansville, South Bend, Gary, and Indianapolis. Results of the meetings may be viewed at: http://www.in.gov/isdh/programs/mch/eccs/makingkidscountincommunity.pdf.

All of the input from the Core Partners, Subcommittees, Community Forum Meetings, and the public, combined, were considered when producing the final strategic plan. The strategic plan promotes an integrated, coordinated, comprehensive system of services for young children. The coordinated system will support ease of access to needed services, increase the utilization of appropriate services and support the role of the family as their child's first teacher. This initiative hopes to ensure that a holistic system of care supports young children and they arrive at school ready to learn.

The Indiana Child Care Health Consultant Program (ICCHCP) (www.iu.edu/~cchealth) is a project of the Maternal and Children's Special Health Care Services. The program is, based at the Early Childhood Center at the Indiana Institute on Disability and Community at Indiana University, Bloomington. Health and safety consultation, training, technical assistance and support to increase the level of health and safety in out-of-home child care settings is provided by a team of six regional child care health consultants and over 50 certified child care health consultants, located throughout Indiana. To date, over 1,000 requests for services have been received from child care settings in over 75 of Indiana's 92 counties. Data collection about service requests, referrals to existing resources, health and safety policies, inclusion of children with special needs, and environmental conditions affecting health status is a critical component of the project.

The program is a joint effort between ISDH and FSSA and funding comes from Child Care Development Fund Quality Dollars and Maternal and Children's Special Health Care Services. The development, implementation and evaluation of this program is guided by an Advisory Team with membership from health, early care and education training and service providing entities, higher education, and child care. ICCHCP provides linkages to existing programs and services in the child care provider's area to assure continued support for providers and the families they serve.

The Indiana State Department of Health (ISDH) is partnering with the Indiana Department of Education (IDOE) to bring Coordinated School Health Programs (CSHP) to the Hoosier State. The CSHP model includes the following eight interactive components: Health Education, Physical Education, Health Services, Nutrition Services, Counseling, Psychological, & Social Services, Healthy School Environment, Health Promotion for Staff, and Family/Community Involvement. Coordination among the components is a vital piece of the model. The key focus areas of CSHP are obesity, nutrition, physical activity, chronic disease, and alcohol, tobacco, and other drugs.

IDOE was awarded a five-year CSHP grant from the Centers for Disease Control and Prevention (CDC) in March of 2003. The grant stipulates a working relationship between IDOE and ISDH, and the budget includes a full-time staff person at ISDH. While the IDOE staff work closely with school personnel on implementing CSHP, the ISDH staff person is responsible for convening an intra-agency workgroup and educating and recruiting various community partners. All interested Indiana schools can receive information and training regarding CSHP, however, ten Indiana School Corporations are receiving intensive training as part of the Michiana Coordinated School Health Leadership Institute.

IDOE also receives CDC funding for the biannual Youth Risk Behavior Survey, which is conducted by ISDH staff. This survey collects data from students in grades 9-12 on the topic of risk behaviors associated with unintentional and intentional injuries, tobacco use, alcohol and other drug use, behaviors that measure the effectiveness of the sexual abstinence and HIV education efforts, unhealthy dietary behaviors, and physical inactivity. Since ISDH was able to obtain a weighted sample that CDC requires to be included in the data in the 2003 survey and has reached the appropriate sample number in 2005, ISDH Adolescent Health Coordinator will be able to use the data to plan interventions in areas of health behavior need. The framework for an Adolescent Health Coalition has been developed. This group will review the data and develop a plan.

In December of 2001, the Immunization Program was awarded a four (4) year GSA/CDC contract with Scientific Technologies Corporation to develop and deploy the Children and Hoosiers Immunization Registry Program (CHIRP). The business and marketing plans were included in the formal Scope of Work (SOW) document developed by immunization program personnel. The fourth and final year of this contract is 2005.

The program employs six public health investigators who are deployed across the entire state. These staff perform CASA/AFIX site visits, perform disease investigations, provide training and support to the medical providers in the public domain. There is one staff member, the CHIRP enrollment specialist, who markets CHIRP to providers in the private sector, provides training, education, support for end users. One senior surveillance epidemiologist is on staff to direct all disease investigations, reporting as required by law, performing disease analyses for all vaccine preventable diseases (VPD). Other staff are a microbiologist, program operations manager, immunization grants coordinator, state immunization systems coordinator, three secretaries, an administrative assistant, and a program director. There are three (3) IT professionals responsible for the daily operations of CHIRP. An MCSHC consultant sits on the Immunization Advisory Committee.

The Injury Prevention Program in Indiana began in 2002 with a CDC grant for violence surveillance integration. An Indiana Injury Prevention Advisory Council has been established and meets 3-4 times per year. An epidemiologist was hired to investigate and assess the status of E code use on hospital discharge data which is not required in Indiana. The analysis of the availability of other recommended data sets has also been accomplished. A law requiring reporting of fireworks related injuries initiated the injury

surveillance program in Indiana by requiring emergency room personnel to report them to ISDH. With the data, a fireworks injury report was completed and disseminated in 2003. Another report, Suicide in Indiana, 1999-2001, analyzed newly available hospital discharge data. The focus of the Injury Prevention Program is Indiana violence data surveillance to use in collaborative interventions with other agencies.

- *Services for CSHCN:* Within ISDH several groups are working on issues related to CSHCN that are infrastructure building.

The Genomics Program received a 4-year federal grant in September 2002 to implement Indiana's State Genetics Plan, which includes facilitation of Indiana's Genetic Advisory Committee (IGAC), enhancement of the Indiana Birth Defects and Problems Registry (IBDPR), the training of physicians and other providers in the concept of the Medical Home and implementation of a statewide Folic Acid Campaign. IGAC has been meeting twice a year for over four years. While no specific policy recommendations have yet emerged, one that is currently under discussion is how blood spots may be used once the screening is complete. About 10 Medical Home trainings have been carried out around the state and an advisory group of interest physicians has assisted in convening these sessions. This function has been contracted to Indiana University Training Services in conjunction with the Indiana Parent Information Network.

An Early Hearing Detection and Intervention (EDHI) Advisory Committee has been convened by the UNHS/EHDI program. This is a rebirth of the UNHS Task Force that worked to legislate and implement the UNHS/EHDI program initially. This group, composed of professionals (audiologists), support agencies (Indiana Hospital & Health Association, Indiana School for the Deaf, etc.) and consumers will begin by updating the parents' handbook that the Task Force helped to create initially. It will also provide a forum for networking and educating the professionals and the public about EHDI. Through HRSA and CDC grant funding, the infrastructure of Regional Audiologists and First Steps Service Coordinators that are trained to provide services to families with infants that failed a hearing screen has been put into place.

The Newborn Screening Program provides training to hospital staff and public health nurses in regard to both metabolic and hearing screening twice a month. In addition, all babies who do not receive screens or whose screen was not acceptable are provided follow-up until the screen is passed or the child is in treatment. This is done in coordination with the hospitals, the local health departments, and the NBS laboratory.

The Indiana Birth Defects and Problems Registry (IBDPR) is a surveillance system that seeks to promote fetal, infant, and child health, in order to prevent birth defects and childhood developmental disabilities, and to enhance the quality of life of affected Indiana residents. Once fully implemented the IBDPR will provide data for policy development and planning, as well as provide some enabling services like early intervention resources and educational materials to families and physicians of children born with birth defects.

Birth defect reporting in Indiana began in 1987 when the birth certificate was revised to detect and record congenital anomalies as part of the birth registration process. However, the Indiana Birth Problems Registry (IBPR) staff determined this format resulted in substantial underreporting of birth defects from information on the birth certificate. Therefore, in the spring of 2001, Indiana made a hallmark step with the establishment of an enhanced birth problems registry and was awarded a CDC Cooperative Agreement to establish the Indiana Birth Defects Surveillance System (IBDSS). This was made possible by IBPR Rule (410 IAC 21-3), which was enacted to define birth problems and establish reporting requirements for the birth problems registry. In 2003, the name of the registry was changed from IBDSS to the Indiana Birth Defects and Problems Registry (IBDPR).

IBDPR currently collects data on all children in Indiana from birth to age three with congenital anomalies or disabling conditions and up to age five for children with fetal alcohol syndrome and autism. The information provided by the registry has the potential to uncover the causes of defects, thus preventing future cases. However, this system can only be effective with quality data. Therefore, accurate reporting of birth defects is extremely important.

The data collected for IBDPR will be used to (1) detect trends in birth defects and suggest areas for further study, (2) address community concerns about the environmental effects on birth outcomes, (3) evaluate education, screening, and prevention programs and (4) establish efficient referral systems that provide special services for the children with identified birth defects and their families.

The CSHCS program developed the Agency Claims and Administrative Processing System (ACAPS) to automate reimbursement and better track claims and enrollment information of this enabling program. This can provide data regarding services and insurance coverage of CSHCN.

The purpose of the Indiana State Asthma Program is to establish a state collaborative body and plan comprehensive asthma activities that are designed to reduce asthma morbidity and mortality in the State of Indiana. Funding for the program is from the federal agency, Centers for Disease Control and Prevention. The program addresses all the citizens of Indiana and in particular those at risk or who suffer from asthma.

The State Asthma Program is managed by the Indiana State Department of Health in collaboration with the Indiana Department of Environmental Management. An Indiana Joint Asthma Coalition was established in June 2003. The coalition has drafted a state asthma plan that was approved by the whole coalition on October 29 2004 ( http://www.in.gov/isdh/programs/asthma/pdfs/IndianaAsthmaPlan.pdf ). A report on the Burden of Asthma in Indiana has been completed. Objectives for federal FY 2005 include 1) enhancing the infrastructure for the asthma program by developing a web site, 2) continuing to mobilize fiscal and public support for decreasing the asthma burden in Indiana, 3) utilizing and improving asthma surveillance data to help plan program

activities, 4) finishing the state asthma plan and beginning to implement it, and 5) evaluating the program.

In Federal FY 2006, the program will begin implementation of the plan. Strategies include working with minority communities to reduce the burden of asthma they suffer.

ISDH and specifically MCSHC coordination efforts with the identified programs, organizations, and groups are as follows:

- Medicaid: With the new gubernatorial administration some changes have occurred that should increase coordination between all of ISDH and Medicaid. The new Health Commissioner also holds the title of Medical Director for Medicaid. In addition, ISDH has an MOU with Office of Medicaid Policy and Planning (OMPP) which promotes cooperation and coordination in data sharing, enrollment processes, and reimbursement for services such as lead among other things. MCSHC has assisted OMPP in marketing and enrolling children in Hoosier Healthwise, in efforts to increase Medicaid providers in counties in which panels are nearly full, and in the implementation of the Chronic Disease Case Management Program. It is anticipated that cooperation will increase in the coming months. In addition, the CSHCS has a common enrollment form with Medicaid and First Steps.
- Supplemental Security Income Program (SSI): SSA currently interfaces with the CSHCS section of MCSHC. Every four months SSA sends a copy of the form SSA-831 for each child under the age of 18 that qualifies of SSI to the CSHCS consultant. If the SSI clients are not already enrolled in CSHCS and have an eligible diagnosis, a letter is sent to the family encouraging them to apply to CSHCS. When the family responds to the letter, a CSHCS consultant explains the program to them and directs them to their local Office of Family and Children to enroll. No additional follow-up is done. This system has been in place for 2 years. ACAPS does track SSI enrollment for statistical purposes. In 2003, 2202 (22%) CSHCS clients were also enrolled in SSI.
- Ryan White and Title IV AIDS programs: MCSHC's Perinatal Consultant works with the HIV/AIDS nurse that provides services to pregnant women. MCSHC prenatal projects disseminate information about being tested for HIV/AIDS and MCSHC has assisted in educating physicians about new laws requiring testing of HIV in pregnant women. In addition, enrollment for the CSHCS Hemophilia Program is done by the HIV/AIDS team through ACAPS.
- Early Intervention Programs: MCSHC has coordinated with First Steps (Indiana's Early Intervention Program) for many years. There is close coordination in the NBS UNHS/EDHI program because all babies who fail the hearing screening are to be referred by the hospitals to the First Steps Systems Point of Entry (SPOE). The EDHI regional audiologists work with the SPOEs to obtain a diagnoses for the babies who have not passed. In addition, through the UNHS/EHDI program, service coordination providers that will become First Steps providers are being trained especially to work with families with infants newly diagnosed with hearing loss. The First Steps Director participates in the Indiana Genetics Advisory Committee and both of the NBS advisory committees. First Steps also shares data with CSHCS and UNHS/EHDI. Healthy Families Indiana is another early intervention program that identifies at the time of the birth of a first baby those families that are at risk of child abuse. MCSHC provides financial support for the training efforts involved in this statewide program.
- Vocational Rehabilitation Programs: MCSHC coordinates with vocational

rehabilitation programs only through their inclusion in the database of providers in the Indiana Family Helpline. Calls from citizens or professionals can obtain appropriate referral contacts to statewide vocational rehabilitation offices and agencies.

- Mental Health Programs including the Child and Adolescent Services System Program (CASSP): There are several coordination efforts that MCSHC has with the Division of Mental Health and Addiction in FSSA. The PSUPP program is funded by the Division of Mental Health and Addiction in part and so MCSHC provides annual reports to this group. While MCSHC at the state level is not currently directly involved with CASSP (known in Indiana for ten years as Systems of Care), at the local level (where 46 counties have state funded Systems of Care for emotionally handicapped and addicted children) MCSHC funded health care projects may provide services for children involved in these programs. In addition, both the Bureau Chief of Children's Services in the Division of Mental Health and Addiction and the Medical Director of MCSHC are involved in the development of Cross Systems Services, specifically a multi-agency effort to develop/identify assessment tools that can bridge systems and provide information for planning for these children regardless of the system from which they are served. The Bureau Chief over this effort also sits on the Early Childhood Comprehensive Systems (ECCS) steering committee with MCSHC staff. The State supported Technical Assistance Center for Systems of Care and Evidence Based Practices for Children and Families is also available in Indianapolis.
- State Interagency Transition Programs: When CSHCS sponsored local agencies to provide care coordination for their clients, the local care coordinators frequently worked closely with the First Steps Service Coordinators in the transitioning from First Steps to school at age three. Unfortunately, local care coordination for CSHCS is no longer funded. Currently, MCSHC is sponsoring a project called the Transitional Health Care For Youth With Special Health Care Needs Assessment And Demonstration Project. It is through Indiana University (IUPUI) School of Medicine Department of Pediatrics. The objectives for this project includes: 1.) assessing current strengths & weaknesses in health care transitions from pediatric to adult care for youth with special health care needs in Indiana; 2.) establishing a database of primary care and subspecialty care providers who wish to participate in transitional health care; 3.) developing desired education methods for families & physicians to address needs in preparation and throughout transition; 4.) providing resources and information for youth, families and physicians through transition; 5.) creating a demonstration model of primary and consultative transition health care. This project is in its first year.
- Developmental Disabilities Programs: MCSHC coordinates with developmental disabilities programs primarily through interactions with the First Steps Program and with the UNHS/EHDI follow-up efforts. The IFHL also includes these programs in their database and can provide callers with these referrals. Some of these agencies may be providers in the CSHCS program.
- SSDI: MCSHC has been awarded an SSDI grant for several years. The focus of this grant has been data system integration.
- School Health Programs: Please refer to the previous section regarding the Coordinated School Health Programs. In addition, the Genomics Program through the Folic Acid Campaign has developed and marketed two—a high school and a middle school—curricula options for teaching about the need for folic acid supplement. These are available on the website (http://www.in.gov/isdh/programs/FolicAcid/index.htm) and have been marketed through science teachers.
- Special Supplemental Nutrition Program for Women, Infants and Children (WIC):

MCSHC works closely with the WIC both at the State level and the local level. At the local level if projects are not co-located referrals are made regularly as needed. At the State level, the WIC Breastfeeding Consultant is the point person for breastfeeding in ISDH and provides the liaison between the WIC Breastfeeding Committee and the IPN Breastfeeding Subcommittee supported by MCSHC. With the ISDH emphasis on reducing obesity especially among children, MCSHC and WIC participate in all ISDH planning meetings.

MCSHC coordinates with other groups of major providers of health and health-related services through these groups' participation on MCSHC program advisory committees. A representative of the Indiana Hospital & Health Association sits on advisory committees for UNHS/EHDI, Indiana Genetics Advisory Committee, and IPN Advisory Board. Genomic/NBS staff working with the Indiana Birth Defects and Problems Registry (IBDPR) interacts with hospitals regularly on data submission for IBDPR. Hospitals also report information regarding NBS tracking, Meconium tracking, and UNHS tracking. The MCSHC Medical Director, Injury Prevention Medical Director and the new Health Commissioner are all pediatricians which provides a built-in contact with Indiana's American Academy of Pediatrics chapter. IPN works closely with Indiana ACOG and AAFP. MCSHC works very collaboratively with Indiana Parent Information Network in promoting the Medical Home concept and providing information and support to families, includes family and parent participation in advisory groups, is helping to support the creation of a Family Voices Chapter of parents with children with hearing loss, and works with March of Dimes and many other support groups in education efforts.

Since the federal definition of CSHCN is broad enough to include all children who participate in Title V funded projects and well as the children served specifically by CSHCS, the discussion of the four constructs of a service system has been done previously in this section. Regarding the first construct—State program collaboration with other State agencies and private organizations, please see Needs Assessment Collaboration Survey Summary (Part 2, p. 8). MCSHC could not provide the services, planning, and surveillance without such collaboration.

Construct two—State support for communities—is indicated through the number (about 100) of grant projects provided at the community level that provide services to low income children that have special health, mental health, and dental health care needs. More specifically, MCSHC supports outreach to the Amish for dental health, adolescent, and hemophilia support, pilot community interventions for overweight children, and a dental sealant mobile unit (some examples of support for communities).

Construct three and four—the coordination of the health components of community-based systems and the coordination of health services with other services at the community level—are the constructs where the CSHCS program has taken a step back. Budgetary issues caused the centralization of services in the CSHCS which essentially discontinued care coordination both at the local and the state level and regional specialty care services. However, these changes also included the CSHCS program encouraging their enrollees to have local primary care physicians that the program reimburses. In addition, MCSHC supports Healthy Families Indiana, the child abuse prevention program that is present in every county. The family support workers encourage and facilitate health care services for all the children involved. First Steps provides service coordination with their clients/families, which includes coordinating the services reimbursed by

CSHCS. Also, MCSHC grantees provide primary health care services in needed areas and care coordination services.

The Needs Assessment process involves data collected from First Steps at the State level and the local level, Step Ahead local contacts (a process of the previous administration, no longer supported, which convened health and social service agencies regularly to coordinate intervention efforts), CSHCS data, Indiana Genetics Advisory Committee members, local health departments, input for the Indiana Parent Information Network staff, and possibly some CSHCS enrollees through the web-based Q-sort survey. Of the 100 respondents to the web survey, 15 were consumers, 33 were health care professionals, 6 were social service providers, 5 were educators, and 35 were in the "Other" category.

Standards of care have been developed for prenatal, family and child health clinics and are implemented through funded clinics. MCSHC in conjunction with IPN has developed or participated in the development of consensus statements and guidelines for Prenatal Care Coordination Best Practices Guide, Breastfeeding Promotion, Emergency Room/Urgent Care Guidelines for Care of Pregnant Women, Indiana Perinatal Depression Guide, Safe Sleeping Guideline poster, Prenatal Care, Early Start Prenatal Services, ASK Smoking Cessation Program, and Prenatal Risk Assessment Tool. These are disseminated through the IPN newsletter, clinical practice alerts, and working with Indiana ACOG and American Academy of Family Practice groups. The Perinatal Consultant also works with the Managed Care Organizations contract by Medicaid to ensure care, particularly care coordination guidelines are followed and reimbursed.

Program effectiveness is monitored through consultation with grantees providing direct and enabling services and their annual report data. MCSHC has for several years incorporated some performance measures into our local grant application including activities of implementing some of the aforementioned protocols like the ASK Smoking Cessation Program into their services, Folic Acid Campaign, and Back to Sleep. The annual reports reflect how they have done within a year. Annual reports also include chart audit review self evaluations and consumer survey information. Program evaluation is based on annual reports as well as statewide improvements in health statistics.

Efforts to monitor continuous quality improvement for each MCH population served by Title V grantees is done through monitoring of the Federal Resource Enabling Data (FRED) collected by grantees regarding their clients' care and looking at changes in performance measures statewide. A cultural diversity survey is complete annually by the grantees and a report on improvements in that area is written annually. The ISDH Epidemiology Resource Center (ERC) also publishes annual Natality and Mortality reports based on birth certificate data. Birth cohorts have been completed on births in 2000 and 2002 by ERC which helps to monitor perinatal improvements. Statewide immunization data has been the sentinel child health monitoring piece. Efforts to monitor continuous quality improvement for the CSHCN population are done in part through the tracking of those infant with abnormal metabolic screens and of those infants who do not pass the UNHS screen to ensure they access treatment. Because CSHCS has been developing and implementing the ACAPS system of enrollment and reimbursement, no surveys to clients or providers have been done for evaluation recently. However, since full implementation is complete, reimbursements to providers are currently timely which is an internal quality

improvement measure. Otherwise, the data from the National Survey of Children with Special Health Care Needs is used for continuous quality improvement monitoring.

**5. Selection of Priority Needs:**
MCSHC determined the priority needs for the Title V agency by evaluating the health statistics for each of the population groups and the capacity information. For this needs assessment, capacity information was collected by Public Health Preparedness Regional Epidemiologists through interviews with First Steps, Step Ahead, local health department, and MCSHC grantee staff and other contacts in 90 of 92 counties. This information was more complete than information obtained from key informants in the last needs assessment. The survey questions incorporated questions of capacity specific to MCSHC areas of concern like availability of smoking cessation classes, exercise/recreational areas, dietitians/nutritionists, etc. as well as health care providers in the direct service and enabling levels of the pyramid.

From this data, MCSHC staff identified issues of concern. Twenty-six data issue fact sheets that provided data for 36 issues and County Fact sheets with sentinel health statistics were created and used with a web-based Q-sort survey. E-mails with a link to the survey were sent to all health departments, MCSHC grantee project directors, community health center directors, First Step coordinators, Step Ahead coordinators, other state agency contacts and advisory groups for Genetics, Child Care Health Consultant Program, IPN et al. A letter was sent by mail to 100 families participating in the CSHCS program to whom a reimbursement had recently been paid (to insure the family was actively using CSHCS). This too was a new method for obtaining public input into the development of the Priorities. Of the 100 respondents who complete all or part of the Q-sort, thirty-three were health care providers; fifteen were consumers/parents; six were social service providers; five were educators; and thirty-five other citizens completed the survey. These responders represented 40 counties. MCSHC felt the method used for public input was successful and more efficient and geographically comprehensive than what was done in years past.

Once the Q-sort information was analyzed, MCSHC team leaders and other ISDH managers considered the survey data, the health and capacity data, the 2005 Indiana State Department of Health Priority Implementation Plan (which has decreasing infant mortality and prematurity rates, decreasing overweight and obese persons in Indiana, reducing asthma morbidity and mortality rates, enhancing access to primary care, and developing a culturally competent work force as goals), Federal Performance Measures, and what issues other organizations are doing statewide. Criteria questions that were asked were: 1) How important is the problem?; 2) Can ISDH do something about the problem?; 3) What is the feasibility?; 4) What is the availability of resources?; 5) Does it fit with purposes of Title V, Healthy People 2010, the Governor's priorities, and other political considerations? We also considered the commitment of funding, staff time, and focus of effort that the priority might have.

The following priorities that were determined reflect issues in all three MCH population groups:

1. To decrease high-risk pregnancies, fetal death, low birth weight, infant mortality, racial and ethnic disparities in pregnancy outcomes.

2. To reduce barriers to access to health care, mental health care and dental care for pregnant women, infants, children, children with special health care needs, adolescents, women and families.
3. To build and strengthen systems of family support, education and involvement to empower families to improve health behaviors.
4. To reduce morbidity and mortality rates from environmentally related health conditions including asthma, lead poisoning and birth defects.
5. To decrease tobacco use in Indiana.
6. To integrate information systems which facilitate early identification and provision of services to children with special health care needs.
7. To reduce risk behaviors in adolescents including unintentional injuries and violence, tobacco use, alcohol and other drug use, risky sexual behavior including teen pregnancy, unhealthy dietary behaviors and physical inactivity.
8. To reduce obesity in Indiana.
9. To reduce the rates of domestic violence to women and children, child abuse and childhood injury in Indiana.
10. To improve racial and ethnic disparities in women of childbearing age, mothers' and children's health outcomes.

## C. Needs Assessment Summary

The following are Indiana's nine priority needs identified through the needs assessment and prioritization process. While most substantive issues have not changed since last year, there has been some change of emphasis and wording. These priorities reflect issues in all three MCH population groups.

1. To decrease high-risk pregnancies, fetal death, low birth weight, infant mortality racial and ethnic disparities in pregnancy outcomes.
2. To reduce barriers to access to health care, mental health care and dental care for pregnant women, infants, children, children with special health care needs, adolescents, women and families.
3. To build and strengthen systems of family support, education and involvement to empower families to improve health behaviors.
4. To reduce morbidity and mortality rates from environmentally related health conditions including asthma, lead poisoning and birth defects.
5. To decrease tobacco use in Indiana.
6. To integrate information systems which facilitate early identification and provision of services to children with special health care needs.
7. To reduce risk behaviors in adolescents including unintentional injuries and violence, tobacco use, alcohol and other drug use, risky sexual behavior including teen pregnancy, unhealthy dietary behaviors and physical inactivity.
8. To reduce obesity in Indiana.
9. To reduce the rates of domestic violence to women and children, child abuse and childhood injury in Indiana.
10. To improve racial and ethnic disparities in women of childbearing age, mothers, and children's health outcomes.

The priority of high-risk pregnancies was merged with a priority on perinatal outcomes and disparity. A greater emphasis has been given to reduction of rates of domestic violence, child abuse, and childhood injury because the issue is closely related to perinatal health and seems to be an increasing problem in Indiana. Increasing immunizations rates are no longer listed as an MCSHC priority because, while MCSHC staff/projects work in collaboration with the Immunization Program, MCSHC does not have direct purview over this effort. Nevertheless, continued collaboration will occur. To impact all of the above priorities, collaboration with other state and local public and private entities will be necessary.

The process used to determine the State's priority needs included the following:

1) hiring an epidemiologist to gather and analyze health status statistics, and some capacity statistics;

2) collaborating with the Public Health Preparedness District Epidemiologists to collect capacity survey data in each county;

3) developing a list of 32 issues based on the health statistics, capacity statistics, comments by the citizens from whom the capacity survey information was obtained, and comments from ISDH staff;

4) developing data sheets on all the issues and county data sheets with sentinel health data;

5) developing a web-based survey using the Q-sort method to determine priorities from the public and including links to all the data sheets;
6) marketing the web-based survey through an e-mail letter to all health departments, funded MCH projects, community health centers, advisory committee members and their list serves; First Steps coordinators; local contacts; and to 100 CSHCS clients for whom a service had recently been reimbursed;
7) analyzing the survey to determine the ranking of the issues;
8) integrating Governor Daniel's paramount goals of better protecting endangered children and better serving the single parents of our state;
9) integrating the ISDH State Health Performance Plan goals and objectives that include decreasing infant mortality and chronic disease; and
10) discussing the issues at a staff meeting to determine final priorities.

The process for the previous needs assessment included outsourcing the development, using key informants for capacity information, presenting the data via teleconference to small groups of primarily health providers around the state, and developing priorities based on the discussion and survey responses of the participants in these small groups.
This new priority list had more public input with more accurate capacity information.

Collaboration from entities from both within ISDH and outside the agency contributed to the selection of the State's priority needs through assistance in collecting the statistical data, the capacity data, identifying issues, and assisting directly with prioritization. MCSHC staff began working with the Public Health Preparedness District Epidemiologists within ISDH who interviewed local county providers in public health, First Steps, hospitals, emergency systems, schools, etc. to complete the surveys. Advisory groups like the Genetics Advisory Committee and Indiana Perinatal Advisory Committee were asked to participate in the web-base survey, as were First Steps staff, Minority Health Coalition, and local health department and MCH clinic staff. Collaborative efforts that occur on an ongoing basis assisted MCSHC staff in gathering the statistical and capacity data in a timely fashion. Contacts made during the needs assessment will continue so that progress on the issues is made.

The analysis of need by population group through quantitative and qualitative methods provides an opportunity to observe how far the State has come and where the state needs to redirect focus. For instance, further analysis of the perinatal focus group and the Community Conversations (community forums) data may provide staff with a different focus on the barriers to access to care. Determining needs by population groups also points out the interrelatedness of the issues and the populations (e.g. women who smoke affect the long-term health of both themselves and their children or unborn children which affects health statistics like infant mortality, the number of children with asthma, women with lung cancer, etc.). This interrelatedness assisted in grouping issues and focusing priorities on issues that could affect improvement in more than one population group.

The State's capacity to meet the health needs of the MCH populations has not changed greatly since the last application. While changes occurring with the new administration are not complete, it is still true that MCHSC staff alone cannot affect the needed improvements in the health of Indiana citizens. Continued and improved collaboration with other state agencies and with public groups, private groups, and citizens will still be necessary to affect improved health

of the populations by reducing smoking, reducing obesity, reducing violence, reducing adolescent risk behaviors, reducing barriers to care and reducing racial and ethnic health disparities.

**D. Health Status Indicators—**Health status indicators have been included in the Needs Assessment where appropriate.

**E. Outcome Measures—Federal and State**

Indiana MCSHC Services continue to focus on the Federal Outcome Measures. Since the first five outcome measures are all related to infant and perinatal mortality rates and the disparity ratio, the activities listed for federal Performance Measures (NPM) numbers 1, 7, 8, 11, 15, 17, and 18 and State Performance Measures (SPM) for FY 2006 numbers 3, 4, 6, 7 are all directly related to improving pregnancy outcomes including disparities. NPM numbers 4, 13, and 14, all related to insurance coverage and participation also have activities which should secondarily be related to pregnancy outcomes through improved access to care.

Some new activities that may give us new insights for intervention that MCSHCS want to accomplish in FY 2006 include using the Perinatal Periods of Risk Approach in targeted counties and statewide. In five targeted counties, Lake, Marion, St. Joseph, Elkhart, Allen, coalitions will continue to be supported which will assist in solving the disparity in birth outcomes. Through SPMs 6 and 7, new infrastructure and intervention efforts will begin in an effort to decrease pregnancies occurring within 18 months to the same mother (Child Spacing Education) and unintended pregnancies. There will be new collaborations with OMPP to educate the public on the availability of family planning beyond six weeks postpartum. Efforts will be continued to find the social determinants that impact unintended pregnancies and access to care.

Outcome Measure 6, the child death rate, is primarily impacted by the activities found in NPM 10. MCSHC will be working in greater collaboration with the injury prevention program to provide educational trainings on subjects like domestic violence and child abuse. More activities may be implemented than appear in this application as childhood injury and domestic violence were determined to be a priority. Also, efforts in Asthma reduction and lead abatement may impact child death rates. In fact, all activities in all the performance measures that improve the health or access to health care of children or children of special health care needs may impact positively the child death rate outcome measure.

**ATTACHMENT**

# State Performance Measures --- Activities for FY 2006

**State Performance Measures --- Activities for FY 2006**

SP 01 - The number of data sets, including the NBS, UNHS, Lead, IBDPR, Immunizations, CSHCS, Vital Statistics, and First Steps Data, that are completely integrated into the Indiana Child Health Data Set.

*FY 2006 Objective:*
*At least one data set will be completely integrated into the Indiana Child Health Data Set.*

Activities to accomplish the FY 2006 Objective:

· The ODS development team, coordinated by the DISC, will develop and test input and output from at least one of the following sources: NBS, UNHS, Lead, Indiana Birth Defects and Problems Registry, Immunizations, CSHCS, and First Steps Data,

SP 02 - The rate per 10,000 for asthma hospitalizations (ICD 9 Codes: 493.0-493.9) among children less than five years old.

*FY 2006 Performance Measure: The rate per 10,000 for diagnosed asthma hospitalization among children less than five years old will drop from 38.0 in CY 2004 to 37.0 in CY 2006.*

Activities to accomplish the FY 2006 Objective:

· The Asthma Burden Report will be updated with use of the BRFSS Child Asthma module and Child Health Call-Back module.
· Work will begin on development of a media campaign about the seriousness of asthma
· Work will begin on development of an in-service training for school personnel and child care providers on asthma management
· The Environmental Quality Workgroup will review Indiana voluntary and regulatory codes and will make recommendations for change.
· The Health Care Provider Workgroup will develop an asthma best practices course for health care providers in Indiana.

SP 03 - The percent of live births to mothers who smoke.

*FY 2006 Performance Objective: Decrease the percent of mothers of live births who smoke to 18.5% in CY 2006.*

Activities to accomplish the FY 2006 Objective:

· The ISDH Prenatal Substance Use Prevention Program (PSUPP) will identify high risk, chemically dependent pregnant women.
· PSUPP will hold two smoking cessation workshops for providers working with pregnant women and women of childbearing age.
· MCSHC consultant will continue to provide training on "You and Me Smoke-Free" program and on the "ASK" Protocol.
· PSUPP will educate women of childbearing age on the possible hazards of using alcohol, tobacco and other drugs during pregnancy.
· PSUPP will continue to participate in community events, health fairs, conferences, and other public forums.
· PSUPP will distribute educational items to providers indicating the importance of identifying at-risk clients.
· PSUPP will offer smoking cessation materials to private physician's offices and Medicaid providers.
· PSUPP will distribute informational items about the impact of substance use among pregnant women to the public.
· PSUPP clinics (3) will provide support groups for women in substance use cessation.
· Terry Zollinger and Associates at the Bowen Center of Indiana University and Purdue University, Indianapolis will continue to perform the data collection process for PSUPP.
· The "ASK" Protocol and the "You and Me Smoke-Free" brochures will available to download on the MCSHC website.
· MCSHC will provide web based training for providers for smoking cessation for pregnant women "Smoking Cessation for Pregnancy and Beyond—Learn Proven Strategies to Help Your Patients Quit".
· PSUPP will continue to be funded by the Division of Mental Health with Federal funds from the Center for Substance Use Prevention and Maternal and Children's Special Health Care Services. Funds from the Indiana Tobacco Prevention and Cessation Agency may be available.
. PSUPP will explore possibilities for further collaboration with OMPP and contracted MCOs to decrease prenatal smoking among pregnant Medicaid clients.

SP 04 - The percent of black women (15 through 44) with a live birth whose prenatal visits were adequate.

*FY 2006 Performance Objective: The percent of Black women (15 through 44) with a live birth during the reporting year whose prenatal visits are adequate will increase to 63% in FY 2006.*

Activities to accomplish the FY 2006 Objective:

· The Office of Minority Health (OMH) continues to work with local counties to support the "Grandmother's teas" to promote breastfeeding, the "Father Support Groups" to promote breastfeeding, and the "Shower Your Baby with Love", baby shower to promote prenatal care and healthy pregnancy among African American mothers.
· MCSHC will provide technical assistance to the five-targeted counties (Allen, Elkhart, Lake, Marion, St. Joseph) to continue with local focus groups and neighborhood forums to substantiate and enhance knowledge of perinatal disparity problems identified through local assessment.
· MCSHC will support Allen, Elkhart, Lake, Marion and St. Joseph counties to mobilize community partnerships between policymakers, health care providers, families, the general public, and others to form county coalitions to identify and solve perinatal disparity issues.
· Each of the five targeted counties, Allen, Elkhart, Lake, Marion and St. Joseph, will receive a perinatal disparities tool kit, developed by IPN and MCSHC consultant, including: perinatal outcome data, research on black perinatal disparity, conducting a local needs assessment, coalition building, working with neighborhoods, how to do educational campaigns and marketing, community development and model neighborhood programs to address African American disparity issues.
· Training provided to county perinatal disparity coalitions on cultural competence, social determinants in perinatal disparities, life course perspective: impact on perinatal care, how to use tools to create and implement local action plans for reducing perinatal disparities, exploring promising approaches for effective action.
· Collaborate with State Minority Health Coalition to address disparities in Allen, Elkhart, Lake, Marion and St. Joseph counties through faith-based programs.
· Develop policies and plans that support individual and community efforts to improve perinatal health and revise the State Perinatal Strategic Plan with emphasis on African-American disparities, social determinants, and community building.
· IPN and MCSHC continue to address perinatal disparities by sponsoring a booth at the Indiana Black Expo Black and Minority Health Fair.
· IPN and Indiana Access begin legislative process to make cultural competence training mandatory as part of the School of Medicine and School Nursing curriculum.
· Sponsor representatives from the five-targeted counties for perinatal disparities for attendance at the National Friendly Access conference being held in Indianapolis September 27-29, 2005.
· Continue FIMRs with focus on perinatal disparities in 4 counties with resulting recommendations to reduce disparities and improve local perinatal systems.

SP 05 - The percentage of children age 0 to 7 years with blood lead levels equal to or greater than 10 Micrograms per deciliter.

*FY 2006 Performance Objective: Decrease the percentage of children age 0 to 7 years with blood lead levels equal to or greater than 10 micrograms per deciliter from the baseline of 2.5%.*

Activities to accomplish the FY 2006 Objective:

· ICLPPP will work with MCSHC to contract out the development of a template for a county regulation that would require the testing of rental housing built prior to 1950, and of housing where a child has been lead poisoned including the requirement to make the housing unit lead safe prior to renting.
· ICLPPP will work with MCSHC to contract out a study to determine the costs to the state of having a child lead poisoned and savings to the state of preventing a child from being lead poisoned. Extrapolate to determine cost benefits to making homes lead safe.
· ICLPPP will work with MCSHC to increase the screening of children by disseminating the Screening and Medical Management form to all physicians in the State that serve children, including WIC, local health departments, MCSHC clinics and Community Health Centers.
· ICLPPP will continue to work with OMPP to pay for case management and environmental assessments of lead poisoned children at 10 micrograms of deciliter or greater.
· ICLPPP will continue to implement all aspects of the Lead Elimination Plan.

SP 06 - The proportion of births occurring within 18 months of a previous birth to the same birth mother.

*FY 2006 Objective: Reduce the proportion of births that occur within 18 months of a previous birth to the same birth mother from 18.4% to 18%.*

Activities to meet the FY 2006 Objective:

. MCSHC consultant provides technical assistance to the Indiana Family Health Council (IFHC), State Title X Agency, awarded a special project grant, to develop a Child Spacing Education Program with messages and materials that are understandable and motivational to the target population in six high-risk counties. Materials will be produced in English and Spanish.
. IFHC, IPN, and MCSHC consultants will collaborate to create a network of providers within Indiana to guide the project and to coordinate future activities.
. IPN will convene an issues subcommittee of the State Perinatal Advisory Board on unintended pregnancy/birth spacing to develop a consensus statement to educate providers on child spacing.
. MCSHC will work with the Office of Medicaid Policy and Planning to develop a statewide educational campaign on availability of extended family planning services to post partum women when the Medicaid Family Planning waiver is approved by the Centers for Medicare and Medicaid Services.
. Indiana Access will analyze matched birth certificate data to the 70% of women who answered they did not want to be pregnant then or ever on the Indiana Access survey of 520 delivering mothers in Marion County.
. MCSHC consultant will participate in Indiana Access coalition activities relating to unintended pregnancy.
. Indiana Access will conduct face-to-face interviews concerning perceptions of unintended pregnancy with persons in targeted neighborhoods in Marion County, utilizing trained volunteer advocates from the targeted neighborhoods.
. MCSHC will replicate the interviews in another targeted county.

SP 07 - Number of community/neighborhood partnerships established in 5 targeted counties to identify perinatal disparities.

*FY 2006 Objective: Increase the number of targeted communities with such community/neighborhood partnerships from 0 to 2.*

Activities to meet the FY 2006 Objective:

. MCSHC provides technical assistance to Allen, Elkhart, Lake, Marion and St. Joseph counties to mobilize community partnerships between policymakers, health care providers, families, the general public, and others to form county coalitions to identify and solve perinatal disparity issues.
. Each of the five targeted counties, Allen, Elkhart, Lake, Marion and St. Joseph, will receive a perinatal disparities tool kit, developed by MCSHC consultant and the Association of Maternal and Child Health Programs (AMCHP) State Action Learning Lab Perinatal Disparities Team, including: perinatal outcome data, research on black perinatal disparity, how to conduct a local needs assessment, coalition building, working with neighborhoods, how to do educational campaigns and marketing, community development, and model neighborhood programs to address African American disparity issues.
. County coalitions will be provided additional technical assistance to increase their knowledge of perinatal disparities and contributing factors, explore promising approaches for effective action, and use tools to create and implement year-long action plans for reducing disparities in their county.
. MCSHC will work with each county coalition, IPN, and the Indiana Minority Health Coalition to present vital record perinatal outcomes, focus group and town meeting results through provider, consumer, and other stakeholder meetings in the five targeted counties to ensure that the planning and delivery of perinatal health care services meet the needs of the at-risk population.
. MCSHC will provide technical assistance to the five-targeted counties (Allen, Elkhart, Lake, Marion, St. Joseph) to assess social/system determinants that create barriers to early entrance into prenatal care in each county with use of at least one of the following tools: Indiana "Mini-PRAMS" surveys, targeted focus groups, ongoing town meetings, FIMR, Perinatal Periods of Risk (PPOR) to substantiate and enhance knowledge of problems identified through local assessment.
. Collaborate with State Minority Health Coalition to address disparities in Allen, Elkhart, Lake, Marion and St. Joseph counties through faith-based programs
. MCSHC will facilitate training to county perinatal disparity coalitions on cultural competence, social determinants in perinatal disparities, life course perspective: impact on perinatal care, how to use tools to create and implement local action plans for reducing perinatal disparities, exploring promising approaches for effective action.
. MCSHC will explore cultural competency training models and initiate cultural competency training to Title V funded projects in at least one county.
. Indiana Access will host the National Friendly Access conference being held in Indianapolis September 27-29, 2005. MCSHC will provide reimbursement for two members of each county coalition to attend the 2-day conference. Plans to implement the Friendly Access

survey statewide will be initiated at this conference and will be implemented in at least one of the targeted counties during FY 2006.

. MCSHC will continue to fund Fetal Infant Mortality Reviews in Marion, Lake, Allen, St. Joseph Counties with a focus on perinatal disparities and resulting recommendations to reduce disparities and improve local perinatal systems.

. Formally evaluate three pilot project models providing perinatal outreach to African-American mothers at the neighborhood level and use the results to replicate successful models in high-risk neighborhoods in other counties.

. MCSHC, IPN, Healthy Start, and county coalitions will collaborate to replicate the Marion County Baby First Advocate model in other counties.

. Disseminate revised Baby First educational videos to all high-risk pregnant women in the five counties.

SP 08 - The percentage of high school students who are overweight or at risk.

*FY 2006 Objective: Decrease the percentage of high school students who are overweight or at risk from 25.2% (2003 YRBS) by 3% over the five years.*

Activities to meet the FY 2006 Objective:

· Plan and implement an educational campaign to promote recognition and awareness of overweight and obesity as a major public health issue.
· Continue funding to the program with Ruth Lilly Education center to increase high school student's awareness of nutrition and physical activity.
· Market state strategic plan for community nutrition, physical activity, obesity and other related chronic diseases in high schools.
· Developing how-to-do models for communities, schools, and families regarding healthy eating and active life style.
· Complete a 5/a Day survey and develop 4 year action plan with the focus on nutrition and physical education in schools.
· Develop a 5/a Day campaign through a collaborative effort with Farm to School Program.
· Evaluate school weight and height data and modify the guidance and process as needed.